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=> S PHENOL TAR?

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309162 TAR?

L1 76 PHENOL TAR?

(PHENOL(W)TAR?)

=> D 1-76 ALL

L1 ANSWER 1 OF 76 CA COPYRIGHT 200 ACS

AN 133:347098 CA

TI Further sesquiterpenoids and phenolics from Taraxacum officinale

AU Kisiel, W.; Barszcz, B.

CS Department of Phytochemistry, Polish Academy of Sciences, Krakow, PL-31 343, Pol.

SO Fitoterapia (2000), 71(3), 269-27

CODEN: FTRPAE; ISSN: 0367-326X  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 CC 11-1 (Plant Biochemistry)  
 AB Five germacrane- and guaiane-type sesquiterpene lactones, including two previously described taraxinic acid derivs., were isolated from the roots of *Taraxacum officinale*, together with benzyl glucoside, dihydroconiferin, syringin and dihydrosyringin. The other three lactones were identified as 11.beta.,13-dihydrolactucin, ixerin D and ainslioside. Moreover, the stereochem. at C-11 in dihydrotaraxinic acid was assigned.

ST sesquiterpenoid **phenol Taraxacum**  
 IT Sesquiterpenes  
 RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (lactones; sesquiterpenoids and phenolics from *Taraxacum officinale*)

IT Dandelion  
 (sesquiterpenoids and phenolics from *Taraxacum officinale*)

IT Germacranolides  
 Guaianolides  
 Phenols, biological studies  
 RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (sesquiterpenoids and phenolics from *Taraxacum officinale*)

IT 118-34-3, Syringin 4304-12-5 7609-06-2, Dihydroconiferin 17609-07-3, Dihydrosyringin 75911-14-7 75911-16-9, 11.beta.,13-Dihydrotaraxinic acid .beta.-glucopyranosyl ester 84294-92-8, Ainslioside 93236-44-3, Ixerin D 111588-31-9  
 RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (sesquiterpenoids and phenolics from *Taraxacum officinale*)

RE.CNT 14  
 RE  
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 (2) Blashek, W; Handbuch der pharmazeutischen Praxis 1998, 3, P897  
 (3) Hansel, R; Phytochemistry 1980, V19, P857  
 (4) Hegnauer, R; Chemotaxonomie der Pflanzen 1964, 3, P476  
 (5) Higuchi, R; Phytochemistry 1977, V16, P1007 CA  
 (6) Jin, H; Yakugaku Zasshi 1982, V102, P911 CA  
 (7) Kisiel, W; Phytochemistry 1993, V34, P1644 CA  
 (8) Kisiel, W; Phytochemistry 1997, V46, P1241 CA  
 (9) Kisiel, W; Pol J Chem 2000, V74, P281 CA  
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 (14) Zidorn, C; Phytochemistry 1999, V51, P991 CA

L1 ANSWER 2 OF 76 CA COPYRIGHT 200 ACS  
 AN 133:194881 CA  
 TI Identification and determination of the main constituents of **phenol tar** with carbon- and proton-NMR spectroscopy  
 AU Skarzynski, Maciej; Otwinowska, Hanna; Wielogorska, Edyta  
 CS Ind. Chem. Res. Inst., Warsaw, Pol.  
 SO Analyst (Cambridge, U. K.) (2000) 125(7), 1331-1334  
 CODEN: ANALAO; ISSN: 0003-2654  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 AB 13C and 1H NMR were employed for the identification and detn. of the main constituents of **phenol tar** from the phenol industrial synthesis process. The carbon and the proton spectra were correlated with

each other with a 2D-HETCOR expt. The presence of cumyl Ph ether, not previously reported, was found and confirmed by the mass spectrum. <sup>1</sup>H NMR detns. of six compds. were repeated at 100 and 500 MHz and no significant difference in the repeatability and the accuracy between the results was found.

ST **phenol tar** analysis NMR spectroscopy

IT 98-86-2, Acetophenone, analysis 536-60-7, Cumyl alcohol 599-64-4, p-Cumylphenol 6362-80-7, 2,4-Diphenyl-4-methylpent-1-ene 18168-40-6, o-Cumylphenol 51667-55-1, Cumyl phenyl ether

RL: ANT (Analyte); ANST (Analytical study)  
(identification and detn. of main constituents of **phenol tar** with carbon- and proton-NMR spectroscopy)

IT 108-95-2P, Phenol, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)  
(identification and detn. of main constituents of **phenol tar** with carbon- and proton-NMR spectroscopy)

RE.CNT 15

RE

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- (2) Gorczynska, K; unpublished results
- (3) Gorska, M; 1974 CA
- (4) Gorska, M; Chem Anal 1973, V18, P909 CA
- (5) Malik, L; 1987 CA
- (6) Malik, L; Petrochemia 1986, V26, P 00 CA
- (7) Malikowska, H; 1975 CA
- (8) Malikowska, H; Chem Anal 1974, V19, P511 CA
- (9) Singliar, M; 1986 CA
- (10) Singliar, M; Chem Prum 1986, V36, P128 CA
- (11) Skarzynski, M; Analyst 1999, V124, P1823 CA
- (12) Skarzynski, M; J Mol Struct 1986, V143, P541 CA
- (13) Skarzynski, M; to be published
- (14) Svob, A; J Chromatogr 1968, V38, P326 CA
- (15) Zimnicka, E; unpublished results

L1 ANSWER 3 OF 76 CA COPYRIGHT 200 ACS

AN 132:39931 CA

TI Determination of phenol in **phenol tars** from the cumene-to-phenol process streams with <sup>13</sup>C-NMR spectroscopy

AU Skarzynski, Maciej; Gorczynska, Krystyna; Leszczynska, Irena

CS Industrial Chemistry Research Institute, Warsaw, 01-793, Pol.

SO Analyst (Cambridge, U. K.) (1999) 124(12), 1823-1825  
CODEN: ANALAO; ISSN: 0003-2654

PB Royal Society of Chemistry

DT Journal

LA English

CC 60-6 (Waste Treatment and Disposal)  
Section cross-reference(s): 80

AB <sup>13</sup>C-NMR spectroscopy was used to det. phenol in **phenol tars** originating from the process of phenol industrial synthesis. Relaxation times, T<sub>1</sub>, of <sup>13</sup>C nuclei in phenol and in dioxane (used as a std. for quantitation) were measured to establish appropriate conditions for acquisition of quant. spectra. Results of <sup>13</sup>C-NMR analyses were compared with results obtained with <sup>1</sup>H-NMR, IR spectroscopy, UV spectroscopy, gas chromatog. and bromometric titrn. Detn. accuracy and repeatability were tested on samples with added weighed amts. of phenol. A great advantage of the <sup>13</sup>C-NMR method is that 3 results from each spectrum are obtained, which may be averaged, while those involving large errors can be rejected. The scatter of relative errors for single results was tested and evaluated at the level  $\pm 0.8\%$ .

ST phenol detn **phenol tar** cumene phenol process stream; carbon <sup>13</sup> NMR spectroscopy detn **phenol tar**; hydrogen <sup>1</sup> NMR spectroscopy detn **phenol tar**; IR UV spectroscopy detn **phenol tar**; gas chromatog detn **phenol tar**; bromometric titrn detn **phenol tar**

IT Tar  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (phenolic; phenol detn. in **phenol tars** from  
 cumene-to-phenol process streams by 13C-NMR inverse gated  
 proton-decoupled spectroscopy in comparison with 1H-NMR, IR and UV  
 spectroscopies, gas chromatog. and bromometric titrn.)

IT 108-95-2P, Phenol, analysis  
 RL: ANT (Analyte); FMU (Formation, unclassified); SPN (Synthetic  
 preparation); ANST (Analytical study); FORM (Formation, nonpreparative);  
 PREP (Preparation)  
 (phenol detn. in **phenol tars** from cumene-to-phenol  
 process streams by 13C-NMR inverse gated proton-decoupled spectroscopy  
 in comparison with 1H-NMR, IR and UV spectroscopies, gas chromatog.,  
 and bromometric titrn.)

IT 98-82-8, Cumene  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
 engineered material use); PROC (Process); USES (Uses)  
 (phenol detn. in **phenol tars** from cumene-to-phenol  
 process streams by 13C-NMR inverse gated proton-decoupled spectroscopy  
 in comparison with 1H-NMR, IR and UV spectroscopies, gas chromatog.,  
 and bromometric titrn.)

IT 123-91-1, Dioxane, analysis  
 RL: ANT (Analyte); NUU (Nonbiological use, unclassified); ANST  
 (Analytical  
 study); USES (Uses)  
 (quantitation std.; phenol detn. in **phenol tars**  
 from cumene-to-phenol process streams by 13C-NMR inverse gated  
 proton-decoupled spectroscopy in comparison with 1H-NMR, IR and UV  
 spectroscopies, gas chromatog. and bromometric titrn.)

RE.CNT 9

RE

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- (3) Field, L; Analytical NMR 1989, P41
- (4) Gillet, S; J Magn Reson 1980, V38, P433 CA
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 1995, P81
- (8) Opella, S; J Chem Phys 1976, V64, P2533 CA
- (9) Skarzynski, M; PhD Thesis Industrial Chemistry Research Institute 1998

L1 ANSWER 4 OF 76 CA COPYRIGHT 200 ACS

AN 131:259179 CA

TI Desalting method of **phenol tar**

IN Dyckman, Arkady Samuilovich; Sarge, Yelena N.; Sarge, Vladimir I.;  
 Gorovits, Boris Issakovich; Petrov, Yury Ivanovich; Krasnov, Leonty  
 Mikhailovich; Malinovsky, Alexander Stanislavovich; Chernukhin, Sergey N.;  
 Fulmer, John William; Sorokin, Anatoly Dmitrievich

PA General Electric Co., USA

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C10C001-18

ICS C10C001-20; C07C037-72; C07C039-04; C07C045-36; C07C049-08

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 11279562	A2	19991012	JP 1998-36510	19980219
	BR 9800211	A	19990921	BR 1998-211	19980225
PRAI	JP 1998-36510		19980219		
AB	A method for desalting of <b>phenol tar</b> , obtained from				

the conversion of cumene to phenol, comprises (a) mixing the salt-contg. tar with a dil. aq. orthophosphoric acid, (b) mixing the tar with the acid to form a mixt., (c) sepg. the mixt. to an org. phase and an aq. phase, and (d) removing the aq. phase contg. most of the salts from the org. phase by >90 wt.% salt removal from the tar.

ST desalting **phenol tar** orthophosphoric acid treatment

IT Phase separation  
(desalting method of **phenol tar**)

IT Tar  
RL: PUR (Purification or recovery ; PREP (Preparation)  
(phenol; desalting method of **phenol tar**)

IT Salts, processes  
RL: REM (Removal or disposal); PROC (Process)  
(removal; desalting method of **phenol tar**)

IT 7664-38-2, Orthophosphoric acid, reactions  
RL: NUU (Nonbiological use, unclassified); RCT (Reactant); USES (Uses)  
(desalting method of **phenol tar**)

IT 98-82-8, Cumene  
RL: RCT (Reactant)  
(manuf. of phenol from conversion of; desalting method of **phenol tar**)

IT 108-95-2P, Phenol, preparation  
RL: BYP (Byproduct); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)  
(tars from manuf. of phenol from cumene; desalting method of **phenol tar**)

L1 ANSWER 5 OF 76 CA COPYRIGHT 200 ACS

AN 131:259172 CA

TI **Phenol tar** desalting method

IN Dyckman, Arkady S.; Sarge, Yelena N.; Sarge, Vladimir I.; Gorovits, Boris I.; Petrov, Yury I.; Krasnov, Leonatii M.; Malinovskii, Alexander S.; Chernukhin, Sergey N.; Sorokin, Anatoly D.; Fulmer, John V.

PA General Electric Company, USA

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07C037-24

NCL 568757000

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5962751	A	19991005	US 1996-638416	19960426
AB	A <b>phenol tar</b> formed in the manuf. of PhOH and Me2CO from cumene and contg. salts is mixed with dil. aq. H3PO4 in either a batch or continuous process, allowed to settle into 2 phases, and the aq. phase contg. most of the salts then removed from the org. phase. The process removes a high percentage of the salts from the tar and reduces fouling and corrosion of downstream equipment.				
ST	tar phenol desalting phosphoric acid				
IT	Tar RL: PEP (Physical, engineering or chemical process); PROC (Process) ( <b>phenol tar</b> desalting method)				
IT	Salts, processes RL: REM (Removal or disposal); PROC (Process) ( <b>phenol tar</b> desalting method)				
IT	108-95-2P, Phenol, preparation RL: IMF (Industrial manufacture); PREP (Preparation) (desalting <b>phenol tar</b> formed in the manuf. of phenol from cumene)				
IT	98-82-8, Cumene RL: MSC (Miscellaneous)				

(desalting **phenol tar** formed in the manuf. of  
phenol from cumene)  
IT 7664-38-2, Phosphoric acid, uses  
RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(desalting **phenol tar** formed in the manuf. of  
phenol from cumene by mixing with aq.)

RE.CNT 24

RE

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- (5) Anon; RU 940401 1994
- (6) Anon; RU 2083546 1995 CA
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- (8) Araki; US 5015786 1991 CA
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- (10) Beltrame, P; Ind Eng Chem Res 1988, V27, P4 CA
- (11) Dyckman; US 5283376 1994 CA
- (12) Dyckman; US 5672774 1997 CA
- (13) Fukuhara; US 5017729 1991 CA
- (14) Himmele; US 4929786 1990 CA
- (15) Hood; US 5371305 1994 CA
- (16) Langley; US 4310712 1982 CA
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- (18) Rumscheldt; US 2301709 1942
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- (20) Sifniades; US 4358618 1982 CA
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- (22) Wu; US 4173587 1979 CA
- (23) Yeh; US 4016213 1977 CA
- (24) Zakoshansky; US 5254751 1993 CA

L1 ANSWER 6 OF 76 CA COPYRIGHT 200 ACS

AN 131:159149 CA

TI **Phenol tar** desalting method by treatment with aqueous  
orthophosphoric acid

IN Dyckman, Arkady Samuilovich; Sarge, Yelena N.; Sarge, Vladimir I.;  
Gorovits, Boris Issakovich; Petrov, Yury Ivanovich; Malinovskii,

Alexander

Stanisl; Chernukhin, Sergey N.; Palmer, John William; Sorokin, Anatoly  
Dmitrievich; Krasnov, Leontii Mikhailovich

PA General Electric Company, USA

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07C037-72

ICS C07C037-86; C10C001-20

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 25, 4

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 937699	A1	19990825	EP 1998-301009	19980211
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AB	Salt-contg. tar, produced from the conversion of cumene into phenol, is desalted by mixed it with dil. aq. orthophosphoric acid in either a batch or continuous process, and the mixt. settled into two phases: an org. phase and an aq. phase contg. most of the salts. The aq. phase contg. the salts is then removed from the org. phase. The process removes a high percentage of the salts from the tar and reduces fouling and corrosion of				

downstream equipment.

ST phenol manuf tar desalting; phenolic tar desalting orthophosphoric acid treatment

IT Extraction  
(of salts from phenol-manuf. tars with aq. orthophosphoric acid)

IT Tar  
RL: PUR (Purification or recovery ; PREP (Preparation)  
(phenol tar desalting method by treatment with aq. orthophosphoric acid)

IT Salts, processes  
RL: REM (Removal or disposal); PROC (Process)  
(phenol tar desalting method by treatment with aq. orthophosphoric acid)

IT Phase separation  
(phenol tar desalting method by treatment with aq. orthophosphoric acid and)

IT Phenols, preparation  
RL: PUR (Purification or recovery ; PREP (Preparation)  
(tar byproduct; phenol tar desalting method by treatment with aq. orthophosphoric acid)

IT 7732-18-5, Water, processes  
RL: NUU (Nonbiological use, unclassified); REM (Removal or disposal);

PROC (Process); USES (Uses)  
(phenol tar desalting method by treatment with aq. orthophosphoric acid)

IT 98-82-8DP, Cumene, tars formed during phenol manuf. from cumene  
108-95-2DP, Phenol, tars formed during manuf. from cumene  
RL: PUR (Purification or recovery ; PREP (Preparation)  
(phenol tar desalting method by treatment with aq. orthophosphoric acid)

IT 7664-38-2, Orthophosphoric acid, reactions  
RL: RCT (Reactant)  
(phenol tar desalting method by treatment with aq. orthophosphoric acid)

RE.CNT 3

RE

- (1) Celluloid Corporation; GB 459217 A 1935
- (2) Gen Electric; EP 0713850 A 1996 CA
- (3) Gen Electric; EP 0770591 A 1997 CA

L1 ANSWER 7 OF 76 CA COPYRIGHT 200 ACS

AN 131:89991 CA

TI Comparative investigation of liquid products from various pyrolysis treatments of lignite coals

AU Lutzkanov, L.; Minkova, V.; Goranova, M.; Angelova, G.; Douchanov, D.

CS Institute Organic Chemistry, Sofia, Bulg.

SO Erdoel, Erdgas, Kohle (1999), 115 (6), 314-316

CODEN: EEKOEY; ISSN: 0179-3187

PB Urban-Verlag

DT Journal

LA English

CC 51-21 (Fossil Fuels, Derivatives, and Related Products)

AB The pyrolysis of Bulgarian lignites was performed by the std. method in

an Al-retort, and by a stream of water vapor pyrolysis (SWVP). The SWVP method yielded higher amts. of liq. products, and it was of great importance for their use as fuel or as raw material in chem. industries

to

know their compn. The yielded amts. on tar were higher for the SWVP, the amts. of yielded phenol water were similar for both methods, and the formation of gaseous products depended on the origin of the lignite. The tars and other liq. products from both types of pyrolysis were characterized on their phys. properties and their chem. compn.

ST brown coal pyrolysis liq product Bulgaria; phenol tar  
lignite pyrolytic liquefaction Bulgaria

IT Coal liquefaction  
Coal liquids  
(brown; comparative investigation of liq. products from various  
pyrolysis treatments of Bulgarian lignite coals)

IT Coal tar  
RL: FMU (Formation, unclassified) FORM (Formation, nonpreparative)  
(brown; comparative investigation of liq. products from various  
pyrolysis treatments of Bulgarian lignite coals)

IT Phenols, formation (nonpreparative)  
RL: FMU (Formation, unclassified) FORM (Formation, nonpreparative)  
(comparative investigation of liq. products from various pyrolysis  
treatments of Bulgarian lignite coals)

IT Coal liquids  
(pyrolysis oils; comparative investigation of liq. products from  
various pyrolysis treatments of Bulgarian lignite coals)

IT Tar  
RL: FMU (Formation, unclassified) FORM (Formation, nonpreparative)  
(pyrolysis; comparative investigation of liq. products from various  
pyrolysis treatments of Bulgarian lignite coals)

IT Coal liquefaction  
(pyrolytic; comparative investigation of liq. products from various  
pyrolysis treatments of Bulgarian lignite coals)

IT Brown coal  
RL: FMU (Formation, unclassified) FORM (Formation, nonpreparative)  
(tar; comparative investigation of liq. products from various  
pyrolysis  
treatments of Bulgarian lignite coals)

RE.CNT 28

RE

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- (2) Angelova, G; Khimiya Tverdogo Topliva 1986, 3, P94 CA
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- (10) Hoering, T; Org Geochem 1984, V5, P267 CA
- (11) House, T; Fuel 1986, V65, P827
- (12) Hu, H; J Fuel Chem and Technol 1992, V20(1), P82 CA
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nefta,  
Tekhnika 1978
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- (16) Lewan, M; Science 1977, V203, P89
- (17) Merril, L; 24th Oil Shale Symp 1988, 4, P51
- (18) Minkova, V; Forshungsh 1984, VA(7-4), P55
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- (20) Minkova, V; Izv Khim BAN 1984, V1 (2), P230 CA
- (21) Missal, P; Erdol und Kohle 1989, V42(9), P346 CA
- (22) Missal, P; PhD thesis, Univ Karlsruhe 1987
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- (25) Sklyar, M; Khimiya tverdogo topliva 1970, 2, P30 CA
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- (27) Valkov, V; PhD thesis, Sofia 1983
- (28) Yanik, J; Fuel 1995, V74(1), P46 CA

L1 ANSWER 8 OF 76 CA COPYRIGHT 200 ACS

AN 129:232983 CA



TI Phenol tar cracking process  
IN Dyckman, Arkady Samuilovich; Zinenkov, Andrey; Gorovits, Boris  
Issakovich;

PA Fulmer, John William  
General Electric Co., USA  
SO Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW

DT Patent

LA English

IC ICM C10C001-19

CC 51-10 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 863195	A1	19980909	EP 1998-301240	19980220
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	RU 2120433	C1	19981020	RU 1997-103102	19970228
	US 6025530	A	20000215	US 1998-18662	19980204
	JP 11021562	A2	19990126	JP 1998-46536	19980227
PRAI	RU 1997-103102		19970228		
	US 1998-18662		19980204		

AB The present invention relates generally to a method for treating phenol tar, and, more particularly, to a method for sepg. valuable products (e.g., cumene, alpha.-methylstyrene, phenol, acetophenone) from phenol tar by treating the tar with steam.

ST phenol tar steam cracking

IT Wastes

IT (phenol tar cracking process)  
67-64-1, Acetone, miscellaneous 80-05-7, Bisphenol-A, miscellaneous  
RL: MSC (Miscellaneous)

IT (phenol tar cracking process)  
108-95-2P, Phenol, preparation  
RL: MSC (Miscellaneous); PUR (Purification or recovery); PREP (Preparation)

IT (phenol tar cracking process)  
98-83-9P, .alpha.-Methylstyrene, preparation 98-86-2P, Acetophenone, preparation  
RL: PUR (Purification or recovery ; PREP (Preparation)

IT (phenol tar cracking process)  
98-82-8P, Cumene  
RL: PUR (Purification or recovery ; RCT (Reactant); PREP (Preparation)  
(phenol tar cracking process)

L1 ANSWER 9 OF 76 CA COPYRIGHT 200 ACS

AN 129:44236 CA

TI Bitumen-based composition for road pavement

IN Tautu, Neculai; Lungu, Simion-Aurel; Olariu, Gheorghe; Muscalu, Constantin-Rasvan; Musteata, Andrei; Stanciu, Valeriu; Helgiu, Catinca

PA Directia Drumuri si Poduri, Iasi, Rom.

SO Rom., 3 pp.

CODEN: RUXXA3

DT Patent

LA Romanian

IC ICM C08L095-00

ICS C10C003-00; C04B026-22; C04B024-36; C09J003-30

CC 58-4 (Cement, Concrete, and Related Building Materials)  
Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RO 105970	B1	19930130	RO 1990-144428	19900314
AB	The compn. consists of 96-97 bitumen (softening point of 43-49.degree., penetration of 81-120 mm/10, duct. lity .gtoreq.100 mm) and 3-4% tar from				

phenol manuf. (d. of 1.04 g/cm<sup>3</sup> at 15.degree., Marcuson inflammation temp. of 82.degree., viscosity of 0.7.degree. E at 20.degree.). The product  
has a satisfactory adhesion to rocks and is suitable for prepn. of asphalt concrete.  
ST bitumen **phenol tar** paving compn; asphalt concrete  
bitumen **phenol tar**  
IT Paving materials  
(bitumen-based compn. for)  
IT Asphalt concrete  
(bitumen-based compn. for road pavement)  
IT Bitumens  
RL: TEM (Technical or engineered material use); USES (Uses)  
(in compn. for road pavement)  
IT Tar  
RL: TEM (Technical or engineered material use); USES (Uses)  
(phenol; in compn. for road pavement)

L1 ANSWER 10 OF 76 CA COPYRIGHT 2001 ACS

AN 128:27167 CA

TI Complex formation of organized molecular films with transition metal ions

AU Liu, Minghua; Ushida, Kiminori; Nakahara, Hiroo; Kira, Akira

CS Chem. Dynamics Lab., RIKEN, Japan

SO RIKEN Rev. (1997), 15, 63-64

CODEN: RIRREE6; ISSN: 0919-3405

PB Institute of Physical and Chemical Research

DT Journal

LA English

CC 66-1 (Surface Chemistry and Colloids)

Section cross-reference(s): 74, 7;

AB Complex formation between Langmuir-Blodgett (LB) films of an amphiphilic org. ligand (5-octadecyloxy-(2,2-thiazolylazo)-**phenol**, **TARC18**) with transition metal ions such as Cu(II), Ni(II) and Zn(II) has been described. The LB film formed colored complexes with these metal ions when the film was immersed into the aq. solns. contg.

the corresponding ions and showed predominant selectivity to Cu(II) ion. The reaction was accelerated upon photoillumination. By utilizing the rate difference of the reaction in dark and upon photoillumination, word "RIKEN" has been written on the LB films.

ST Langmuir Blodgett film org metal complex; copper zinc nickel org LB film; complex formation organized film metal ion

IT Complexation

Langmuir-Blodgett films

(complex formation between Langmuir-Blodgett films of an amphiphilic org. ligand and transition metal ions)

IT 14701-22-5, Nickel ion 2+, properties 15158-11-9, Copper ion 2+, properties 23713-49-7, Zinc ion 2+, properties 187669-94-9

RL: PEP (Physical, engineering or chemical process); PRP (Properties);

RCT

(Reactant); PROC (Process)

(complex formation between Langmuir-Blodgett films of an amphiphilic org. ligand and transition metal ions)

L1 ANSWER 11 OF 76 CA COPYRIGHT 2001 ACS

AN 127:6343 CA

TI Recovery of valuable products from **phenol tar**

IN Dyckman, Arkady Samuilovich; Boyarsky, Vadim P.; Malinovski, Alexander Stanisla; Petrov, Yury Ivanovich; Krasnov, Leontii Mikhailovich;

Zinenkov,

Andrey; Gorovits, Boris Issakovich; Chernukhin, Sergey N.; Sorokin, Anatoly Dmitrievich; Fulmer, John William

PA General Electric Company, USA

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent  
LA English  
IC ICM C07C037-86  
ICS C07C039-04  
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
Section cross-reference(s): 25  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 770591	A2	19970502	EP 1996-307595	19961018
	EP 770591	A3	19970813		
	EP 770591	B1	20000405		
	R: BE, DE, ES, FR, GB, IT, NL				
	US 5672774	A	19970930	US 1995-547252	19951024
	JP 09176066	A2	19970708	JP 1996-271226	19961015
	ES 2144213	T3	20000601	ES 1996-307595	19961018
	CN 1154399	A	19970716	CN 1996-122012	19961022

PRAI US 1995-547252 19951024

AB Recovery of valuable products from **phenol tar**, obtained from a phenol and acetone manufg. process comprises charging a **phenol tar** into a thermocracking process column-type reactor, heating the bottoms of the reactor at 200-360.degree. and 0.1-5 atm abs., and cracking the tar in the presence of 0.1-1.0% phosphoric

acid

preheated at 50-180.degree., with such phosphoric acid being added whereby

it dehydrates and polymerizes to its nonvolatile polyphosphoric acid analogs. Bisphenol A tars can be optionally cracked under these conditions mixed with the **phenol tar** and enhanced yields obtained.

ST **phenol tar** thermocracking valuable product recovery

IT Tar

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(recovery of valuable products from **phenol tar**)

IT Cracking (reaction)

(thermo; recovery of valuable products from **phenol tar**)

IT 7664-38-2, Phosphoric acid, uses

RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(recovery of valuable products from **phenol tar**)

IT 98-82-8P, Cumene 98-83-9P, preparation 108-95-2P, Phenol, preparation

RL: PUR (Purification or recovery); PREP (Preparation)  
(recovery of valuable products from **phenol tar**)

IT 80-05-7, uses

RL: NUU (Nonbiological use, unclassified); USES (Uses)  
(tar; recovery of valuable products from **phenol tar**)

L1 ANSWER 12 OF 76 CA COPYRIGHT 2001 ACS

AN 126:216943 CA

TI Complex Formation between Monolayers of a Novel Amphiphilic Thiazolylazo Dye and Transition Metal Ions at the Air/Water Interface

AU Liu, Minghua; Kira, Akira; Nakahara, Hiroo

CS Institute of Physical and Chemical Research (RIKEN), Wako, 351-01, Japan

SO Langmuir (1997), 13(4), 779-783

CODEN: LANGD5; ISSN: 0743-7463

PB American Chemical Society

DT Journal

LA English

CC 66-1 (Surface Chemistry and Colloids)

Section cross-reference(s): 73, 7;

AB The novel amphiphile 5-(octadecyloxy)-2-(2-thiazolylazo)**phenol** (**TARC18**) formed a stable condensed type monolayer at the air/water interface. When transition metal ions such as Fe(II), Co(II), Ni(II), Cu(II), Zn(II), and Cd(II) were present in the aq. subphase, 1:1 complexes

of TARC18 with the above metal ions were formed in the monolayers at the air/water interface. The formation of these complexes was verified by measurements of the .pi.-A isotherms and the absorption spectra of the monolayers at the air/water interface in situ. The TARC18 monolayer showed strong ability to incorporate the Cu(II) ion in the subphase, resulting in a larger limiting area and lower collapse pressure of the monolayer on the subphase contg. Cu(II) ion in comparison with those on the subphase contg. the other metal ions. Moreover, the Cu(II) ion was predominantly bound to the TARC18 monolayer when all the above ions coexisted in the subphase.

ST octadecyloxythiazolylazophenol transition metal coordination adsorption  
IT Adsorption  
Coordination  
(complex formation between monolayers of amphiphilic octadecyloxythiazolylazophenol dye and transition metal ions at air/water interface)

IT Surface area  
Surface pressure  
(of octadecyloxythiazolylazophenol dye on water surface)

IT UV and visible spectra  
(of octadecyloxythiazolylazophenol transition metal complexes at air/water interface)

IT 187669-94-9P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);

RCT  
(Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(complex formation between monolayers of amphiphilic octadecyloxythiazolylazophenol dye and transition metal ions at air/water interface)

IT 112-89-0, Octadecyl bromide 147-1-22-5, Nickel 2+, reactions  
15158-11-9, Copper 2+, reactions 15438-31-0, Iron 2+, reactions  
22537-48-0, Cadmium 2+, reactions 22541-53-3, Cobalt 2+, reactions  
23713-49-7, Zinc 2+, reactions  
RL: RCT (Reactant)  
(complex formation between monolayers of amphiphilic octadecyloxythiazolylazophenol dye and transition metal ions at air/water interface)

IT 187669-98-3P 187670-02-6P 187670-06-0P 188047-04-3P 188047-05-4P  
188047-06-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(complex formation between monolayers of amphiphilic octadecyloxythiazolylazophenol dye and transition metal ions at air/water interface)

L1 ANSWER 13 OF 76 CA COPYRIGHT 2001 ACS  
AN 126:192820 CA  
TI Photoaccelerated Complex Formation of a Novel Langmuir-Blodgett Film with Transition Metal Ions and Its Ion Selectivity  
AU Liu, Minghua; Ushida, Kiminori; Kura, Akira; Nakahara, Hiroo  
CS Institute of Physical and Chemical Research (RIKEN), Wako, Japan  
SO J. Phys. Chem. B (1997), 101(7), 101-1104  
CODEN: JPCBFK; ISSN: 1089-5647  
PB American Chemical Society  
DT Journal  
LA English  
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 78  
AB The complex formation of an organized Langmuir-Blodgett (LB) film with transition metal ions in aq. solns. was obsd. The LB film of 5-(octadecyloxy)-2-(2-thiazolylazo)phenol (TARC18) complexes with transition metal ions such as Ni(II), Cu(II), and Zn(II) in aq. solns., and the reaction was accelerated by photoillumination. The

measurement of optical absorption spectra revealed that two kinds of complexes with the ligand to center metal ion ratios of stoichiometric 2:1 and 1:1 were formed in CuCl<sub>2</sub> soln, while stoichiometric 1:1 complexes were formed in aq. NiCl<sub>2</sub> and ZnCl<sub>2</sub> solns. The X-ray diffraction and ESR measurements of the LB films confirmed that the regular arrangements of the LB films were retained even after the complex was formed with the metal ion. The optical absorption measurement and an inductively coupled plasma anal. of the metal ion complexed LB film showed that the LB film had a selective binding ability to Cu(II) ion when all the above metal ions were present in the soln.

ST photochem complexation LB film transition metal; TARC18 photolysis transition metal complexation ESR, octadecyloxy thiazolylazo phenol transition metal complexation; nickel zinc copper complexation LB film

IT Coordination  
ESR (electron spin resonance)  
Langmuir-Blodgett films  
Photolysis  
UV and visible spectra  
(photoaccelerated complex formation of Langmuir-Blodgett film with transition metal ions and its ion selectivity)

IT Transition metals, reactions  
RL: RCT (Reactant)  
(photoaccelerated complex formation of Langmuir-Blodgett film with transition metal ions and its ion selectivity)

IT 187669-98-3 187670-02-6 187670-06-0 187670-10-6  
RL: FMU (Formation, unclassified), PRP (Properties); FORM (Formation, nonpreparative)  
(photoaccelerated complex formation of Langmuir-Blodgett film with transition metal ions and its ion selectivity)

IT 7447-39-4, Copper chloride (CuCl<sub>2</sub>), reactions 7646-85-7, Zinc chloride (ZnCl<sub>2</sub>), reactions 7718-54-9, Nickel chloride (NiCl<sub>2</sub>), reactions 187669-94-9  
RL: RCT (Reactant)  
(photoaccelerated complex formation of Langmuir-Blodgett film with transition metal ions and its ion selectivity)

L1 ANSWER 14 OF 76 CA COPYRIGHT 2001 ACS  
AN 125:89595 CA  
TI Desalting **phenol tar** from cumene process by washing with water  
IN Dyckman, Arkady Samuilovich; Sarge, Vladimir I.; Sarge, Yelena N.; Gorovits, Boris Issakovich  
PA General Electric Company, USA  
SO Eur. Pat. Appl., 6 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM C07C037-72  
ICS C07C037-08; C07C039-04; C10C001-18  
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
Section cross-reference(s): 60  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 713850	A1	19960529	EP 1995-307903	19951106
	EP 713850	B1	19990421		
	R: BE, DE, ES, FR, GB, IT, NL				
	RU 2064917	C1	19960810	RU 1994-40401	19941104
	CA 2161995	AA	19960524	CA 1995-2161995	19951102
	JP 08301803	A2	19961119	JP 1995-300358	19951120
	US 5847235	A	19981208	US 1997-869384	19970605
	US 6034282	A	20000307	US 1998-127489	19980731
PRAI	RU 1994-40401		19941104		
	RU 1994-401		19941123		

US 1995-531352 19950920  
 US 1997-869384 19970605

AB Salt content in PhOH tar is reduced by washing with H2O alone and no other solvents in a countercurrent flow extractor. For example, PhOH tar from cumene oxidn. process contg. 0.13% inorg. salts was subjected to countercurrent liq. extn. with H2O in a multistage pulsed column extractor to give salts content of 0.001%.

ST **phenol tar** desalting water extn; extractor  
**phenol tar** desalting water; extn countercurrent  
**phenol tar** desalting

IT Salts, processes  
 RL: REM (Removal or disposal); PROC (Process)  
 (desalting **phenol tar** from cumene process by washing with water)

IT Tar  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (from cumene process; desalting **phenol tar** from cumene process by washing with water)

IT Wastes  
 (chem., hazardous, desalting **phenol tar** from cumene process by washing with water)

IT Extraction apparatus  
 (column, pulsed, desalting **phenol tar** from cumene process by washing with water)

IT 108-95-2P, Phenol, preparation  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
 (desalting **phenol tar** from cumene process by washing with water)

IT 98-82-8, Cumene  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process)  
 (desalting **phenol tar** from cumene process by washing with water)

IT 98-83-9, .alpha.-Methylstyrene, processes 98-86-2, Acetophenone, processes 599-64-4, p-Cumylphenol 617-94-7, .alpha.,.alpha.-Dimethylbenzyl alcohol 6144-04-., .alpha.-Methylstyrene dimer  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (**phenol tar** contg.; desalting **phenol tar** from cumene process by washing with water)

IT 7732-18-5, Water, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (washing agent; desalting **phenol tar** from cumene process by washing with water)

L1 ANSWER 15 OF 76 CA COPYRIGHT 2001 ACS  
 AN 125:36294 CA  
 TI Removal and neutralization of acid catalyst from products of cumene hydroperoxide cleavage  
 IN Fulmer, John W.; Griaznov, Andrei K.; Kight, William D.; Zakoshansky, Vladimir M.  
 PA General Electric Company, USA  
 SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C07C037-68  
 NCL 568754000  
 CC 45-4 (Industrial Organic Chemical., Leather, Fats, and Waxes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 5510543	A	19960423	US 1994-353004	19941209

EP 716068 A2 19960612 EP 1995-308396 19951122  
 EP 716068 A3 19960807  
 R: BE, DE, ES, FR, GB, IT, NL  
 CA 2163573 AA 19960610 CA 1995-2163573 19951123  
 CN 1132193 A 19961002 CN 1995-120519 19951206  
 JP 08259481 A2 19961008 JP 1995-317009 19951206  
 PRAI US 1994-353004 19941209  
 AB The process useful for the recovery of phenol from a cleavage mass  
 resulting from the sulfuric acid cleavage of cumene hydroperoxide  
 comprises neutralizing the cleavage mass, forming an aq. phase and an  
 org. phase, sepg. the org. phase into an acetone-rich stream and a phenol-rich  
 stream, removing **phenol tars** from the phenol-rich  
 stream, and cracking the **phenol tars**, wherein the  
 improvement comprises maintaining the pH of the cleavage mass during  
 neutralization at 4.0-4.9 and the sulfuric acid is converted to the  
 bisulfate salt to reduce the corrosion of the process equipment. A  
**phenol tar** waste stream contg. <4 ppm chromium is  
 obtained.  
 ST cumene hydroperoxide cleavage acid catalyst neutralization; pH control  
 sulfuric acid cumene hydroperoxide  
 IT Corrosion prevention  
 Decomposition catalysts  
 (removal and neutralization of acid catalyst from products of cumene  
 hydroperoxide cleavage)  
 IT 7664-93-9, Sulfuric acid, processes  
 RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process);  
 PROC (Process); USES (Uses)  
 (removal and neutralization of acid catalyst from products of cumene  
 hydroperoxide cleavage)  
 IT 67-64-1P, Acetone, preparation 08-95-2P, Phenol, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (removal and neutralization of acid catalyst from products of cumene  
 hydroperoxide cleavage)  
 IT 80-15-9, Cumene hydroperoxide  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
 (Process)  
 (removal and neutralization of acid catalyst from products of cumene  
 hydroperoxide cleavage)  
 IT 98-82-8, Cumene  
 RL: RCT (Reactant)  
 (removal and neutralization of acid catalyst from products of cumene  
 hydroperoxide cleavage)  
 L1 ANSWER 16 OF 76 CA COPYRIGHT 2001 ACS  
 AN 124:59854 CA  
 TI Production of C6-9 aromatic hydrocarbon fractions by catalytic  
 hydrogenation of cumene oxidation waste  
 IN Mukhitov, Ilgis Khabipovich; Kameskiy, Anatolij Aleksandrov; Shalimova,  
 Lyudmila Vladimirovna; Gabutdinov, Malik Salikhovich; Yusupov, Nail  
 Khabipovich; Vasilev, Vladimir Fedorovich; Gusev, Yuriy Vladimirovich;  
 Emelina, Svetlana Vladimirovna; Khairova, Lyudmila Alekseevna  
 PA Aktsionernoe Obshchestvo "Organicheskij Sintez", Estonia  
 SO Russ.  
 From: Izobreteniya 1995, (10), 15.-2.  
 CODEN: RUXXE7  
 DT Patent  
 LA Russian  
 IC ICM C07C015-02  
 ICS C07C039-04  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2032652	C1	19950410	RU 1992-5060912	19920527

PRAI SU 1992-5060912 19920527  
 AB Title only translated.  
 ST arom hydrocarbon manuf cumene oxidn waste  
 IT Hydrogenation catalysts  
 (for manuf. of C6-9 arom. hydrocarbons from cumene oxidn. waste)  
 IT Hydrogenation  
 (manuf. of C6-9 arom. hydrocarbons by catalytic hydrogenation of  
 cumene  
 oxidn. waste)  
 IT Aromatic hydrocarbons, preparation  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical  
 process); PREP (Preparation); PROC (Process)  
 (C6-9, manuf. by catalytic hydrogenation of cumene oxidn. waste)  
 IT Zeolites, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (ZSM 23, for manuf. of C6-9 arom. hydrocarbons from cumene oxidn.  
 waste)  
 IT Zeolites, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (ZSM 8, for manuf. of C6-9 arom. hydrocarbons from cumene oxidn.  
 waste)  
 IT 1313-99-1, Nickel oxide (NiO), uses 1314-13-2, Zinc oxide, uses  
 1343-88-0, Magnesium silicate 1344-28-1, Alumina, uses 7440-05-3,  
 Palladium, uses 7440-06-4, Platinum, uses 7440-31-5, Tin, uses  
 7782-41-4, Fluorine, uses 11098-99-0, Molybdenum oxide  
 RL: CAT (Catalyst use); USES (Uses)  
 (for manuf. of C6-9 arom. hydrocarbons from cumene oxidn. waste)  
 IT 98-82-8D, Cumene, oxidn. waste  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (phenol tar; prodn. of C6-9 arom. hydrocarbon  
 fractions by catalytic hydrogenation of)

L1 ANSWER 17 OF 76 CA COPYRIGHT 2001 ACS  
 AN 123:318578 CA  
 TI Phenol tar waste reduction process with recovery of  
 phenol, cumene and .alpha.-methylstyrene  
 IN Dyckman, Arkadys S.; Fulmer, John. Kight, William D.; Zinenkov, Andrey;  
 Boyarsky, Vadim P.; Gorovits, Boris I.; Krasnov, Leontii M.; Malinovski,  
 Alexander S.; Petrov, Yury I.; et al.  
 PA General Electric Company, USA  
 SO U.S., 3 pp.  
 CODEN: USXXAM

DT Patent  
 LA English  
 IC ICM C07C037-68  
 NCL 568754000

CC 51-10 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5457244	A	19951010	US 1994-330149	19941004
	CA 2157712	AA	19960405	CA 1995-2157712	19950907
	EP 705813	A1	19960410	EP 1995-306803	19950926
	EP 705813	B1	19990331		
	R: BE, DE, ES, FR, GB, IT, NL				
	ES 2129762	T3	19990616	ES 1995-306803	19950926
	CN 1125250	A	19960626	CN 1995-117235	19950929
	CN 1046754	B	19991124		
	JP 08208544	A2	19960813	JP 1995-252112	19950929
PRAI	US 1994-330149		19941004		

AB An improved phenol tar cracking process using a  
 rectification column as a hydrocracker obtains an increased yield of  
 valuable products, phenol, cumene and .alpha.-methylstyrene, by taking  
 from 50 to 100% of the acetophenone in the reactor overhead with the  
 cracked product stream.



ST phenol recovery tar waste; cumene recovery tar waste; alpha methylstyrene recovery tar waste  
 IT Tar  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (phenol tar waste redn. process with recovery of phenol, cumene and .alpha.-methylstyrene)  
 IT 98-82-8P, Cumene 98-83-9P, .alpha.-Methylstyrene, preparation  
 108-95-2P, Phenol, preparation  
 RL: PUR (Purification or recovery ; PREP (Preparation)  
 (phenol tar waste redn. process with recovery of phenol, cumene and .alpha.-methylstyrene)  
 IT 98-86-2, Acetophenone, reactions  
 RL: RCT (Reactant)  
 (phenol tar waste redn. process with recovery of phenol, cumene and .alpha.-methylstyrene)

L1 ANSWER 18 OF 76 CA COPYRIGHT 2001 ACS  
 AN 120:326180 CA  
 TI Method of phenol extraction from phenol tar  
 IN Dyckman, Arkady S.; Gorovitz, Boris I.; Somov, Anatoly M.; Taranenko, Svetlana A.; Polyakov, Sergey A.; Malinovsky, Alexandr S.; Petrov, Yury I.; Sorokin, Anatoly D.; Krasnov, Leonty M.  
 PA General Electric Co., USA  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C07C037-70  
 ICS C07C037-72  
 NCL 568760000  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5283376	A	19940201	US 1993-54663	19930423
AB	The title method comprises prepg. an amine soln., contacting the phenol tar (high-boiling byproducts from cumene peroxidn.) with the amine water to form amine phenate in the water soln., and heating the water soln. to decomp. amine phenate into amine and phenol. Stirring 3% ammonia soln with phenol tar, sepg. the org. phase, and refluxing the combined aq. phases gave phenol and ammonia.				
ST	phenol extn cumene peroxidn byproduct; amine phenol extn cumene peroxidn byproduct				
IT	Amines, uses RL: USES (Uses) (extn. by, of phenol, from cumene peroxidn. byproduct)				
IT	7664-41-7, Ammonia, uses RL: USES (Uses) (extn. by, of phenol, from cumene peroxidn. byproduct)				
IT	108-95-2P, Phenol, preparation RL: PREP (Preparation) (extn. of, from phenol tar)				

L1 ANSWER 19 OF 76 CA COPYRIGHT 2001 ACS  
 AN 120:109965 CA  
 TI Method of phenol extraction from phenol tar byproduct  
 IN Dyckman, Arkady Samuilovich; Gorovitz, Boris Issakovich; Polyakov, Sergey Alexandrovich; Somov, Anatoly Maximovich; Taranenko, Svetlana Alakseevna; Malinovsky, Alexandr Stanislavovich; Petrov, Yury Ivanovich; Sorokin, Anatoly Dmitrievich; Krasnov, Leonty Mikhailovich  
 PA General Electric Co., USA  
 SO Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW  
 DT Patent

LA English  
IC ICM C07C037-86  
ICS C07C039-04  
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 567338	A2	19931027	EP 1993-303159	19930422
	EP 567338	A3	19941117		
	EP 567338	B1	19980311		
	R: BE, ES, FR, GB, IT, PT				
	RU 2032656	C1	19950410	RU 1992-5042551	19920423
	CA 2094654	AA	19931024	CA 1993-2094654	19930422
	ES 2113488	T3	19980501	ES 1993-303159	19930422
	BR 9310640	A	19931026	BR 1993-1640	19930423
	JP 06080596	A2	19940322	JP 1993-97645	19930423
	CN 1094025	A	19941026	CN 1993-104371	19930423

PRAI SU 1992-5042551 19920423

AB **Phenol tar** byproduct resulting from cumene oxidn.  
process is contacted with an amine water soln. to form aminophenate in  
the

water soln. and heating the water soln. to decomp. the aminophenate into  
amine and phenol. Stirring 30 g **phenol tar** with 45 mL  
3% NH3 for 1 h, removing the org. layer, repeating the process twice,  
combining the aq. layers, refluxing for 4 h, extn. and distn. the aq.  
layer recovered 95% phenol from the **phenol tar**.

ST phenol extn cumene oxidn byproduct; amine phenol extn cumene oxidn tar

IT Amines, uses

RL: USES (Uses)

(extn. by, of phenol, from **phenol tar** byproduct)

IT 7664-41-7, Ammonia, uses

RL: USES (Uses)

(extn. by, of phenol, from **phenol tar** byproduct)

IT 108-95-2P, Phenol, preparation

RL: PREP (Preparation)

(extn. of, from **phenol tar** byproduct of cumene  
oxidn.)

IT 98-82-8, Cumene

RL: USES (Uses)

(oxidn. byproduct of, phenol extn. from)

L1 ANSWER 20 OF 76 CA COPYRIGHT 2001 ACS

AN 118:239567 CA

TI Elution of phenols from tar-containing broken road pavement

AU Glet, Walther

CS Deutag Asphalttech. GmbH, Cologne 5000/21, Germany

SO Bitumen (1991), 53(4), 154-61

CODEN: BITUAK; ISSN: 0006-3916

DT Journal

LA German

CC 58-4 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 60

AB Results are presented from elution of phenols from simulated broken road  
pavement using a paving asphalt-mineral mixt. as the starting material,  
and differences related to different binder components (asphalt emulsion,  
Pectacrete (waterproofed cement), portland cement, and brown-coal fly  
ash)

are compared and discussed.

ST elution **phenol tar** contg road pavement; waterproofed  
cement binder phenol elution pavement

IT Asphalt

RL: USES (Uses)

(binder, in broken tar-contg. road pavement, phenol elution from,  
modeling of)

IT Phenols, miscellaneous

RL: MSC (Miscellaneous)  
 (elution of, from broken tar-contg. road pavement, modeling of)  
 IT Elutriation  
 (of phenols, from broken tar-contg. road pavement, modeling of)  
 IT Tar  
 RL: USES (Uses)  
 (pavement contg., phenol elution from broken, modeling of)  
 IT Ashes (residues)  
 (brown-coal fly, binder, in broken tar-contg. road pavement, phenol  
 elution from, modeling of)

L1 ANSWER 21 OF 76 CA COPYRIGHT 2001 ACS  
 AN 116:213279 CA  
 TI Effect of filtration before refrigeration on polyphenols and potassium  
 bitartrate precipitation in sherry wines  
 AU Lopez Romasanta, Fernando; Pinedo Contreras, Jose Manuel; Casas Asin,  
 Jose  
 Alberto  
 CS Cent. Invest. Desarrollo Control Calidad, Gonzalez Byass S.A., Spain  
 SO Aliment., Equipos Tecnol. (1991), 10(10), 51-5  
 CODEN: AEQTDY; ISSN: 0212-1689  
 DT Journal  
 LA Spanish  
 CC 17-13 (Food and Feed Chemistry)  
 AB Fino and Oloroso sherry wines were filtered after clarification by using  
 membranes of pore size 0.22-1.20  $\mu$ m. Filtration had no effect on  
 polyphenols nor on potassium bitartrate pptn. during subsequent  
 refrigeration.  
 ST sherry wine filtration **phenol tartrate**  
 IT Filtration  
 (of sherry wine, polyphenols and potassium bitartrate pptn. in  
 relation  
 to)  
 IT Phenols, biological studies  
 RL: BIOL (Biological study)  
 (polyhydric, of sherry wine, filtration effect on)  
 IT Wine  
 (sherry, filtration of, polyphenols and potassium bitartrate pptn. in  
 relation to)  
 IT 868-14-4, Potassium bitartrate  
 RL: BIOL (Biological study)  
 (pptn. of, in sherry wine, filtration effect on)

L1 ANSWER 22 OF 76 CA COPYRIGHT 2001 ACS  
 AN 115:165803 CA  
 TI Experimental study of rapid thermal decomposition of activated sludge  
 AU Liu, Lifeng; Zhao, Shuchang; Deng, Yizhao; Yan, Chengwei; Chang, Yuqin  
 CS Chem. Eng. Coll., Dalian Univ. Technol., Dalian, Peop. Rep. China  
 SO Huanjing Kexue (1991), 12(2), 2-8  
 CODEN: HCKHDV; ISSN: 0250-3301  
 DT Journal  
 LA Chinese  
 CC 60-4 (Waste Treatment and Disposal)  
 Section cross-reference(s): 51, 52  
 AB A rapid thermal decompn. treatment of activated sludge is cost effective  
 and superior to the conventional incineration. A lab. study of sludge  
 treatment at 550-850.degree. at 800 g/h, in the absence or presence of  
 air, shows the prodn. of coal gas (heat value >12.54 times 103 kJ/m3)  
 and tar, which can be recovered as energy and material resources.  
 ST activated sludge thermal decompn. resource recovery  
 IT Tar  
 RL: PREP (Preparation)  
 (prodn. of, from wastewater sludge thermal decompn.)  
 IT Wastewater treatment sludge  
 (thermal decompn. of, coal gas and tar prodn. from)

IT Hydrocarbons, preparation  
 RL: USES (Uses)  
 (C3-4, coal gas contg., from wastewater sludge thermal decompn.)

IT Tar  
 RL: PREP (Preparation)  
 (brown-coal, prodn. of, from wastewater sludge thermal decompn.)

IT Tar  
 RL: PREP (Preparation)  
 (coal, prodn. of, from wastewater sludge thermal decompn.)

IT Fuel gases  
 (coal gas, prodn. of, from wastewater sludge thermal decompn.)

IT 74-82-8, Methane, uses and miscellaneous 74-84-0, Ethane, uses and  
 miscellaneous 74-85-1, Ethene, uses and miscellaneous 124-38-9,  
 Carbon  
 dioxide, uses and miscellaneous 630-08-0, Carbon monoxide, uses and  
 miscellaneous 1333-74-0, Hydrogen, uses and miscellaneous  
 RL: USES (Uses)  
 (coal gas contg., from wastewater sludge thermal decompn.)

IT 1300-71-6, Dimethyl **phenol** 1319-77-3, Methyl **phenol**  
 62-53-3, Aniline, uses and miscellaneous 85-01-8, Phenanthrene, uses  
 and  
 miscellaneous 90-12-0, .alpha.-Methyl naphthalene 91-20-3,  
 Naphthalene, uses and miscellaneous 91-22-5, Quinoline, uses and  
 miscellaneous 91-57-6, .beta.-Methyl naphthalene 95-13-6, Indene  
 108-95-2, Phenol, uses and miscellaneous 119-65-3, Isoquinoline  
 RL: PROC (Process)  
 (tar contg., from wastewater sludge thermal decompn.)

L1 ANSWER 23 OF 76 CA COPYRIGHT 2001 ACS

AN 114:146658 CA

TI Improvement control system of tar acid distillation

AU Hoshi, Katsuyuki; Shimoyamada, Mitsuo; Kunita, Kenji

CS Adochemco Corp., Kasaoka, 714, Japan

SO Aromatikkusu (1991), 43(1/2), 34-

CODEN: AROMBO; ISSN: 0365-6187

DT Journal

LA Japanese

CC 51-17 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 45, 46

AB A control system for a tar acid distn. column was developed and applied  
 to

a tar distn. plant. The system consists of a distributed control system  
 which is connected to field instruments and sensors, and a control  
 computer, which has a database developed from manual operation of the  
 plant under past control systems. When the new system was applied to the  
 tar acid distn. plant, consisting of 4 distn. columns connected in  
 series,

to optimize the amt. of feed, the variation in the amt. of feed was  
 decreased to .ltoreq.0.5, the fluctuation of the temps. inside the PhOH  
 column and the o-cresol column was decreased to .apprx.0.5, and the

purity

of product o-cresol was improved by 0.8%. No manual adjustment of  
 process

parameters of the PhOH and the o-cresol distn. columns by operators was  
 required.

ST coal tar distn optimization control; tar acid distn control;  
**phenol** tar acid distn control; cresol tar acid distn  
 control

IT Tar acids

RL: USES (Uses)

(distn. of, computerized distributed control system for)

IT Distillation

(of coal tar acids, computerized distributed control system for)

IT Process control and dynamics

(computerized, of distn. of coal tar acids)

IT 95-48-7P, uses and miscellaneous 108-95-2P, Phenol, preparation  
RL: PREP (Preparation); USES (Uses)  
(manuf. of, by distn. of coal tar acids, computerized distributed  
control system for)

L1 ANSWER 24 OF 76 CA COPYRIGHT 2001 ACS

AN 113:197136 CA

TI Method of treatment of scrubbing wastewaters

IN Walasek, Andrzej; Naczynski, Jerzy; Demusiak, Grzegorz; Tabernacki, Jan;  
Witkowski, Andrzej

PA Instytut Gornictwa Naftowego i Gazownictwa, Pol.

SO Pol., 4 pp.

CODEN: POXXA7

DT Patent

LA Polish

IC ICM C02F009-00

CC 60-1 (Waste Treatment and Disposal)

Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 134581	B1	19850831	PL 1982-236216	19820429
AB	In the title method, aq. fly ash suspensions (1.0 to eq. 10 mg/dm <sup>3</sup> ) are sepd.				

by filtering on a 0.3-2-m high coke bed at a flow rate 0.5-2 m/h.

Oil-tar

substances are subjected to biosorption with excess activated sludge by  
addn. of 2-7 g dried org. mass/m<sup>3</sup> wastewater. The remaining suspension

is

alkalized, preferably with milk of lime, to pH 6.5-9 and simultaneously  
settled. The resulting sediment is discharged, followed by ammonia  
removal, preferably to 2 mg/dm<sup>3</sup>. The wastewater is cooled to 278-308 K,  
dild. to a volatile phenol content 100-400 mg/dm<sup>3</sup>, nutrient medium is  
added (preferably PO43-), and then the wastewater is subjected to biol.  
purifn. with activated sludge at a concn. 1.5-8 g/dm<sup>3</sup> (dry mass) during 4  
h aeration. Optional decolorization is provided with an inorg. sorbent.  
During the purifn., the wastewater is dild. with the purified wastewater  
to a 100-400 mg/dm<sup>3</sup> volatile phenol content; the treated water is  
continuously recycled. The purified wastewater, the excess sediment, and  
biosorption sludge are also used to quench the coke in the combustion  
process.

ST **phenol tar** removal wastewater bio.; flue gas scrubbing  
wastewater treatment

IT Phenols, uses and miscellaneous  
Tar

RL: REM (Removal or disposal); PROC (Process)

(removal of, from flue gas scrubbing wastewaters, by activated-sludge  
treatment)

IT Wastewater treatment

(activated-sludge process, phenols and tars removal by, continuous  
recycle of treated water in)

L1 ANSWER 25 OF 76 CA COPYRIGHT 2001 ACS

AN 113:155207 CA

TI Manufacture of active carbon

IN Sonelski, Marian; Chodynski, Andrzej; Turonek, Michal; Zin, Marta

PA Glowny Instytut Gornictwa, Pol.

SO Pol., 3 pp.

CODEN: POXXA7

DT Patent

LA Polish

IC ICM C01B031-08

CC 49-1 (Industrial Inorganic Chemicals)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	PL 136551	B2	19860228	PL 1983-245258	19831220
	PL 148891	B4	19891230	PL 1986-263106	19861217

PRAI PL 1983-245258 19831220

AB The title product is manufd. from coal dust and a binder by mixing, extruding the resulting paste, carbonizing and activating final granules. The binder is obtained from cyclohexanol distn. residue, wastes from oxidizing synthesis of acids and alcs. from paraffins, **phenol tar**, and aliph. fractions of paper industry wastes.

ST coal dust active carbon manuf; binder cyclohexanol distn residue

IT Binding materials  
(cyclohexanol distn. residues-contg., for activated carbon manuf.)

IT Paper  
(manuf. of, wastes from, binder contg., for active carbon manuf.)

IT 7440-44-0P, Carbon, preparation  
RL: PREP (Preparation)  
(active, manuf. of, binder from cyclohexanol distn. residues in, for waste utilization)

IT 98-82-8P, Cumene 108-93-0P, Cyclohexanol, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. of, wastes from, binder contg., for active carbon manuf.)

L1 ANSWER 26 OF 76 CA COPYRIGHT 2001 ACS

AN 112:27122 CA

TI Adsorption of the complex of niobium(V) with tartaric acid and 2-(5'-bromo-2'-pyridylazo)-5-diethylaminophenol at the hanging mercury drop electrode

AU Jin, Wenrui; Yang, Qingfeng; Mai, Guangxin; Wang, Shuren

CS Dep. Chem., Shandong Univ., Jinan Peop. Rep. China

SO Huaxue Xuebao (1989), 47(7), 650-  
CODEN: HHHPA4; ISSN: 0567-7351

DT Journal

LA Chinese

CC 72-2 (Electrochemistry)  
Section cross-reference(s): 66

AB The adsorption was studied of a Nb(V) ternary complex with tartaric acid and 2-(5'-bromo-2'-pyridylazo)-5-diethylamino)phenol (I) by a hanging Hg drop electrode in H2SO4. This complex can be adsorbed at potentials between +0.03 and -0.10 V vs. SCE Redn. of the adsorbed complex proceeds reversibly. An equation is given for the concn. of the complex and its redn. product for adsorptive voltammetry, depending on the diffusion coeff. and the stability const. in the Nb complex, the diffusion layer thickness, and the concn. of free Nb and I in soln.

ST adsorption niobium bromopyridylazodiethylaminophenol tartaric acid complex; mercury electrode adsorption niobium complex

IT Adsorption  
(of niobium-(bromopyridylazo)(diethylamino)**phenol-tartaric acid complexes** in sulfuric acid soln.)

IT 7439-97-6, Mercury, properties  
RL: PRP (Properties)  
(adsorption by electrode from, of niobium-(bromopyridylazo)(diethylamino)**phenol-tartaric acid complexes**)

IT 7664-93-9, Sulfuric acid, properties  
RL: PRP (Properties)  
(adsorption of niobium-(bromopyridylazo)(diethylamino)**phenol-tartaric acid complexes** by mercury hanging drop electrode in soln. of)

IT 87-69-4D, Tartaric acid, niobium- bromopyridylazo)(diethylamino)phenol complexes 7440-03-1D, Niobium, complexes with (bromopyridylazo)(diethylamino)phenol and tartaric acid 14337-53-2D, 2-(5'-Bromo-2'-pyridylazo)-5-(diethylamino)phenol, niobium-tartaric acid complexes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)

L1 ANSWER 27 OF 76 CA COPYRIGHT 2001 ACS  
 AN 111:102785 CA  
 TI Extraction of cumylphenols from **phenol tar** waste for  
 preparation of disinfectants  
 IN Macho, Vendelin; Adam, Valer; Kosalko, Rudolf; Chernykh, S. P.; Abramova,  
 G. V.; Pavlov, G. P.; Brezula, Ludovit; Hlinstak, Karel; Jurecekova,  
 Emilia; Polievka, Milan  
 PA Czech.  
 SO Czech., 7 pp.  
 CODEN: CZXXA9  
 DT Patent  
 LA Slovak  
 IC ICM A61L002-16  
 CC 63-8 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 244560	B1	19860717	CS 1983-8697	19831123

AB The disinfectant is prepd. from **phenol tar** waste  
 resulting in manuf. of phenol and acetone from cumene. The tar contains  
 16-50% 4-cumylphenol and 2-cumylphenol. After vacuum distn., the  
 cumylphenol conc. is optionally converted to alkali metal, alk. earth  
 metal, or NH<sub>4</sub> cumylphenolate. The products are sepd. by extn.  
 Cumylphenols are disinfectants with high antibacterial and antimycotic  
 activities. They are more effective than conventional cresols. A crude  
**phenol tar** contg. .alpha.-methylstyrene 0.2,  
 acetophenone 13.3, dimethylphenylcarbinol 8.2, phenol 5, cumylphenol  
 36.2,  
 .alpha.-methylstyrene dimer 22.4% and balance nonidentified compds. was  
 distd. at 2.67 kPa and 27-165.degree.. The remaining distn. residue  
 (b.p.  
 > 165.degree., 70.6 wt.%) contained cumylphenol 47, acetophenone 1.2,  
 dimethylphenylcarbinol 0.6, .alpha.-methylstyrene 0.6, and  
 .alpha.-methylstyrene dimers 31%. n-Hexane was employed for extn. of  
 cumylphenols at 33.degree.. Cumylphenol, **phenol tar**,  
**phenol tar** distn. residue, and conventional tricresol  
 were converted to Na salts. The resulting soln. was prepd. at concns. 1,  
 2.5, and 5%. The min. inhibition concn. of Na salts of cumylphenol,  
**phenol tar**, **phenol tar** distn.  
 residue, and cresol against Escherichia coli was 62, 320, 160, and 320  
 mg/mL, resp.

ST disinfectant cumylphenol **phenol tar**  
 IT Bactericides, Disinfectants, and Antiseptics  
 (cumylphenols from **phenol tar** wastes)  
 IT Gasoline  
 Hydrocarbons, biological studies  
 Ligroine  
 RL: BIOL (Biological study)  
 (extn. by, of antiseptic cumylphenols, from **phenol**  
**tar** wastes)  
 IT Tar  
 RL: BIOL (Biological study)  
 (from phenol manuf., antiseptic cumylphenol isolation from)  
 IT Alkanes, biological studies  
 RL: BIOL (Biological study)  
 (C5-12, extn. by, of antiseptic cumylphenols, from **phenol**  
**tar** wastes)  
 IT Alkanes, biological studies  
 RL: BIOL (Biological study)  
 (C5-8, extn. by, of antiseptic cumylphenols, from **phenol**  
**tar** wastes)  
 IT 599-64-4, 4-Cumylphenol 18168-4-6  
 RL: PROC (Process)

(crystn. of, from phenol tar wastes, as disinfectant)

IT 110-54-3, n-Hexane, biological studies 142-82-5, n-Heptane, biological studies  
 RL: BIOL (Biological study)  
 (extn. by, of antiseptic cumylphenols, from phenol tar wastes)

IT 53551-56-7P 122431-20-3P 122431-21-4P 122431-22-5P  
 RL: PREP (Preparation)  
 (prepn. of, as disinfectant)

L1 ANSWER 28 OF 76 CA COPYRIGHT 2001 ACS  
 AN 109:192606 CA  
 TI Separation of phenol from tar  
 IN Hamano, Toshikatsu  
 PA Asahi Glass Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C07C039-04  
 ICS C07C037-70; C07C037-86  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 Section cross-reference(s): 23

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63119431	A2	19880524	JP 1986-263942	19861107
AB	The title process, without Na2SO4 pollution, involves reaction of PhOH (I)-contg. tar with caustic alkali, diffusion dialysis of the resulting phenolate by cation-exchange membrane with H2SO4 in one chamber, and while sepg. I, electrolyzing the alkali sulfate salt to produce H2SO4 and caustic alkali for recycle use. Reacting I-contg. tar with 10% NaOH, and feeding the resulting Na phenolate to one chamber of diffusion dialysis, with other chamber contg. 10% H2SO4 and Na2SO4, produced 94 g/h I and a mixed soln. of 49 g/h H2SO4 and 2.3 g/h Na2SO4. The soln. was electrolyzed at 5 V, 30 A/dm2 producing 40 g/h NaOH at the cathode and 98 g/h H2SO4 and 142 g/h Na2SO4 at the anode.				
ST	phenol recovery tar fraction; diffusion dialysis phenol tar sepn; electrolysis phenol tar sepn				
IT	Electrolysis (for reactant recycle in sepn. of phenol from tar)				
IT	Dialysis (in sepn. of phenol from tar, electrolysis for reactant recycle in)				
IT	Tar RL: USES (Uses) (phenol sepn. from, diffusion dialysis and electrolysis in)				
IT	Cation exchangers (membranes, for diffusion dialysis, for sepn. of phenol from tar)				
IT	108-95-2P, Phenol, preparation RL: PREP (Preparation) (sepn. of, from tar, diffusion dialysis and electrolysis in)				

L1 ANSWER 29 OF 76 CA COPYRIGHT 2001 ACS  
 AN 109:112426 CA  
 TI Arylalkylation of phenol  
 IN Macho, Vendelin; Jurecek, Ludovit Adam, Valer; Kavala, Miroslav; Jurecekova, Emilia; Hlinstak, Karol; Mikula, Oldrich; Strecko, Julius; Schwarz, Frantisek; Varga, Mikula.  
 PA Czech.  
 SO Czech., 12 pp.  
 CODEN: CZXXA9  
 DT Patent  
 LA Slovak



IC ICM C07C039-12  
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 245895	B1	19861016	CS 1985-3567	19850520
AB	The selectivity of PhOH arylalkylation with .alpha.-methylstyrene (I) and its unsatd. dimers to o- and p-cumylphenol is increased if I and I dimers are continuously or semicontinuously added to the PhOH excess in the presence of arylalkylation and/or alkylation catalysts (active earth, polyphosphates, zeolites) at 60-200.degree., or if a 1:(2-10) (molar) mixt. of I and I dimers with PhOH is contacted with the catalyst. This method suppresses conversion of I to unreactive satd. dimers (e.g., 1,1,3-trimethyl-3-phenylindan). The unreacted I and I dimers are prepd. by rectification of <b>phenol tars</b> and may contain .ltoreq.40% cumylphenols, PhOH, MeCOPh, and other components.				
ST	phenol arylalkylation methylstyrene manuf cumylphenol				
IT	Aralkylation catalysts (activated clay or bentonite or zeolites, for for methylstyrene with phenol)				
IT	Bentonite, uses and miscellaneous RL: USES (Uses) (activated, catalysts, for arylalkylation of phenol with methylstyrene)				
IT	Zeolites, uses and miscellaneous RL: CAT (Catalyst use); USES (Uses) (catalysts, for arylalkylation of phenol with methylstyrene)				
IT	Aralkylation (of phenol with methylstyrene, cumylphenol manuf. by)				
IT	Phenols, preparation RL: PREP (Preparation) (aralkyl, manuf. of, by arylalkylation of phenol with methylstyrene)				
IT	6362-80-7, 2,4-Diphenyl-4-methyl-1-pentene 22768-22-5 22768-23-6 RL: USES (Uses) (arylalkylation by, of phenol, cumylphenol manuf. by)				
IT	98-83-9, .alpha.-Methylstyrene, reactions RL: RCT (Reactant) (arylalkylation by, of phenol, cumylphenol manuf. from)				
IT	108-95-2, Phenol, reactions RL: RCT (Reactant) (arylalkylation of, with methylstyrene, cumylphenol manuf. by)				
IT	18168-40-6P RL: PREP (Preparation) (manuf. of, by arylalkylation of phenol with methylstyrene)				
IT	1335-30-4 RL: USES (Uses) (zeolites, catalysts, for arylalkylation of phenol with methylstyrene)				

L1 ANSWER 30 OF 76 CA COPYRIGHT 2001 ACS

AN 108:36276 CA

TI Composition of champagnes of central Moldavia

AU Prida, I. A.

CS Tekhnol.-Konstr. Inst., USSR

SO Sadovod. Vinograd. Mold. (1987), 8), 47-52

CODEN: SVMOE8

DT Journal

LA Russian

CC 16-3 (Fermentation and Bioindustrial Chemistry)

AB The chem. compn. of 7 different varieties of champagne from central Moldavia was comparatively studied. There was a correlation between organoleptic properties and the concns. of some components of wine material. High-quality champagne should contain .ltoreq.80 g/dm3 aldehydes, .gtoreq.2.0-2.5 g/dm3 tartaric acid, .gtoreq.6.0 g/dm3 glycerol, and .ltoreq.200-250 mg/dm3 phenolic compds.

ST champagne chem compn quality Moldavia; wine champagne aldehyde glycerol  
**phenol tartrate**  
 IT Polysaccharides, biological studies  
 Proteins, biological studies  
 RL: BIOL (Biological study)  
 (in champagne, of central Moldavia)  
 IT Aldehydes, biological studies  
 Phenols, biological studies  
 RL: BIOL (Biological study)  
 (in champagne, of central Moldavia, quality in relation to)  
 IT Wine  
 (champagne, chem. compn. and quality of, of central Moldavia)  
 IT 56-81-5, Glycerol, biological studies 87-69-4, Tartaric acid,  
 biological  
 studies  
 RL: BIOL (Biological study)  
 (in champagne, of central Moldavia, quality in relation to)

L1 ANSWER 31 OF 76 CA COPYRIGHT 2001 ACS  
 AN 107:136313 CA  
 TI Continuous distillation of crude tar acid  
 IN Kuwana, Yasuo; Ueda, Takeshi; Honda, Tomoji  
 PA Sumikin Coke and Chemicals Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C07C039-02  
 ICS C07C037-74  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62051634	A2	19870306	JP 1985-192469	19850830
	JP 01010504	B4	19890222		

AB High-purity phenol and o-cresol are obtained by continuous distn. of  
 crude

tar acids using a sequentially connected phenol column, o-cresol column,  
 m,p-cresol column, and xylenol column, where in each column two different  
 fractions are collected sep. from the top and the side outlets. Thus, a  
 dewatered and depitched tar acid compn. contg. 32.4% phenol, 13.4%  
 o-cresol, 37.1% m,p-cresol, 17.1% xylenol and 70 ppm org. S was fed to

the  
 columns at appropriate operating conditions and top outlet/side outlet  
 discharge ratios (10, 3.3, and 13.3% for phenol, o-cresol, and m,p-cresol  
 columns, resp.) to produce 99.1, 99.6, and 90.5% pure phenol, o-cresol,  
 and m,p-cresol, resp.

ST **phenol tar acid distn**

IT Tar acids

RL: PROC (Process)

(distn. of, continuous, for sepn. of high-purity phenol and cresol)

IT 95-48-7P, o-Cresol, preparation 108-95-2P, Phenol, preparation

RL: PREP (Preparation)

(continuous distn. of tar acids for sepn. of)

L1 ANSWER 32 OF 76 CA COPYRIGHT 2001 ACS

AN 106:159223 CA

TI Separation and identification of the fractions of coal tar by using  
 liquid-crystal glass capillary chromatography and gas chromatography-mass  
 spectrometry

AU Shen, Chunfang; Shao, Lingxian; Su, Keman; Li, Guozhen; Ge, Hailin

CS Dep. Chem., East China Inst. Chem. Technol., Shanghai, Peop. Rep. China

SO Huadong Huagong Xueyuan Xuebao (1986), 12(3), 333-42

CODEN: HHKPDH; ISSN: 0253-9683

DT Journal  
 LA Chinese  
 CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 80  
 AB Liq. crystal-coated glass capillary columns are used for the sepn. of 4 coal tar fractions, i.e., anthracene oil, absorption oil, phenolic oil, and light oil. BaCO<sub>3</sub> is deposited before coating with the liq. crystals by a static coating technique. Better results are obtained by using BBBT [103445-68-7] and EPMB [74011-98-6] columns for sepg. the anthracene oil and wash oils, resp. A MPBOB [26314-56-7] column is used for sepg. PhOH [108-95-2] and light oil.  
 ST coal tar gas chromatog capillary; tar oil chromatog capillary; **phenol tar** gas chromatog capillary; liq crystal chromatog capillary tar  
 IT Liquid crystals  
 (coatings, for capillary columns, for gas chromatog., of coal-tar fractions)  
 IT Absorption oils  
 Anthracene oil  
 Tar oils  
 (gas chromatog. of, on liq. crystal-coated capillary columns)  
 IT Chromatography, gas  
 (of coal-tar fractions, on liq. crystal-coated capillary columns)  
 IT 26314-56-7 60469-98-9 74011-98-6 103445-68-7 103445-71-2  
 RL: USES (Uses)  
 (coatings, for capillary columns, for gas chromatog., of coal-tar fractions)  
 IT 108-95-2, Phenol, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (gas chromatog. of, in tar fractions, on liq. crystal-coated capillary column)

L1 ANSWER 33 OF 76 CA COPYRIGHT 2001 ACS

AN 106:7272 CA

TI Study of liquid products from rapid pyrolysis of coal

AU Kazakov, E. I.; Amanalieva, S. T. Kornil'eva, V. F.; Molchanova, I. V.

CS Energ. Inst. im. Krzhizhanovskogo Moscow, USSR

SO Khim. Tverd. Topl. (Moscow) (1986, (5), 40-4

CODEN: KTVTBY; ISSN: 0023-1177

DT Journal

LA Russian

CC 51-19 (Fossil Fuels, Derivatives, and Related Products)

AB The ultra-rapid pyrolysis of powd. Kok-Yanguk, Kirgizia coal (bituminous, D) in an inert atm. at 0.6 s and 900.degree. gave 13.3% (based on org. matter) tar contg. 56.4% phenols and a pyroligneous liq. contg.

.ltoreq.27

g/L phenols. The following phenols were identified: PhOH [108-95-2], cresol [1319-77-3], xlenol [1300-71-6], pyrocatechol [120-80-9], 4-methylpyrocatechol [452-86-8], 4-ethylpyrocatechol [108-46-3], resorcinol [1124-39-6], and methylresorcinol [62662-81-1].

ST coal rapid pyrolysis **phenol tar**

IT Phenols, uses and miscellaneous

RL: USES (Uses)

(in tars, from rapid pyrolysis of bituminous coal)

IT Tar

RL: USES (Uses)

(coal, phenol compn. in)

IT 108-46-3, 4-Ethylpyrocatechol, uses and miscellaneous 108-95-2, preparation 120-80-9, Pyrocatechol, uses and miscellaneous 452-86-8, 4-Methylpyrocatechol 1124-39-6, 4-Ethylpyrocatechol 1300-71-6,

Xlenol

1319-77-3, Cresol 62662-81-1

RL: USES (Uses)

(in tars, from rapid pyrolysis of bituminous coal)

L1 ANSWER 34 OF 76 CA COPYRIGHT 2001 ACS  
 AN 105:136749 CA  
 TI Characterization of tar from the pyrolysis of Godavari coal  
 AU Sharma, D. K.; Sulimma, A.; Van Heek, K. H.; Juentgen, H.  
 CS Indian Inst. Technol., Delhi, India  
 SO Erdoel Kohle, Erdgas, Petrochem. 1986), 39(8), 357-60  
 CODEN: EKEPAB; ISSN: 0014-0058  
 DT Journal  
 LA English  
 CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
 AB In the pyrolysis of Godavari coal India ( Ar, steam, and H,  
 450-650.degree. and 1-66 bars), the compn. of the tar is affected by atm.  
 under which the pyrolysis is performed. The prodn. of arom. compds. in  
 the tar in Ar and steam atm. increased with temp. Increasing the  
 pressure  
 in Ar resulted in the redn. of arom. compds. in the tar. In H and steam,  
 increasing the pressure reduced the phenolic content in the tar.  
 ST tar compn coal pyrolysis India; arom **phenol tar** coal  
 pyrolysis  
 IT Steam  
 (coal carbonization in, tar compn. in relation to)  
 IT Aromatic compounds  
 Phenols, uses and miscellaneous  
 RL: USES (Uses)  
 (in coal tar, carbonization atm. effect on)  
 IT Aromaticity  
 (of coal tar, carbonization atm. effect on)  
 IT Tar  
 RL: PRP (Properties)  
 (coal, pyrolysis, compn. of, atm. effect on)  
 IT 1333-74-0, uses and miscellaneous 7440-37-1, uses and miscellaneous  
 RL: USES (Uses)  
 (coal pyrolysis in presence of tar compn. in relation to)

L1 ANSWER 35 OF 76 CA COPYRIGHT 2001 ACS  
 AN 105:117849 CA  
 TI Infrared spectra of coal tar and its fractions  
 AU Yakovleva, T. P.; Vail, E. I.  
 CS Ukr.-Nauchno-Issled. Uglekhim. Inst., Kharkov, USSR  
 SO Koks Khim. (1986), (7), 32-6  
 CODEN: KOKKAI; ISSN: 0023-2815  
 DT Journal  
 LA Russian  
 CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
 AB The IR spectra of coal tar contain a band at 3560-3530 cm-1  
 characteristic  
 of PhOH-naphthalene .pi.-complex [76760-07-1]. These complexes form via  
 H bonds between the OH groups of PhOH and the .pi. electrons of  
 naphthalene. The foregoing confirms that coal tar and its fractions are  
 complex physicochem. systems which comprise not only individual  
 components  
 but also various products of interaction of these components.  
 ST coal tar IR hydrogen bond; **phenol tar pi** complex;  
 naphthalene tar pi complex  
 IT Anthracene oil  
 (IR spectroscopy of)  
 IT Spectrochemical analysis  
 (IR, of coal-tar fractions)  
 IT Tar  
 RL: PRP (Properties)  
 (coal, IR spectroscopy of)  
 IT 76760-07-1  
 RL: PROC (Process)  
 (IR detection of, in coal tar and tar fractions)

L1 ANSWER 36 OF 76 CA COPYRIGHT 2001 ACS  
AN 104:173238 CA  
TI Phenolic resin refractory binders  
IN Chinen, Eitatsu; Tamura, Junji; Nakamura, Nobuyoshi  
PA Nippon Steel Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM C04B035-00  
ICS C08G008-28; C08L061-06  
CC 57-6 (Ceramics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60226453	A2	19851111	JP 1984-81906	19840425
AB	Title binders for castable refractories contain nitrated phenolic resin compns. or arom. nitro compds. Strength and slagging resistance of refractories are improved. Thus, 100 parts binder compn. contg. PhOH-HCHO copolymer 15, phenol tar distn. residue (b.p. .gtoreq.250.degree.) 55, arom. hydrocarbon fraction (contg. phenanthrene) 20, and xylenol fraction 10% was mixed with 2 parts 2,4-dinitrotolene to give a binder for mud materials. Carbon residue content of the binder was 30.4% vs. 28.5% in the absence of dinitrotoluene.				
ST	refractory binder phenolic resin blend				
IT	Aromatic hydrocarbons, uses and miscellaneous RL: USES (Uses) (binders contg., refractory, for increased strength and slagging resistance)				
IT	Refractories (binders for, for increased strength and slagging resistance)				
IT	Tar RL: USES (Uses) (phenolic residues from, in refractory binders, for increased strength and slagging resistance)				
IT	51-28-5, uses and miscellaneous 85-01-8, uses and miscellaneous 88-89-1 99-65-0 100-02-7, uses and miscellaneous 121-14-2 9003-35-4D, nitrated 27478-34-8 RL: USES (Uses) (binders contg., refractory, for increased strength and slagging resistance)				
IT	9003-35-4 RL: USES (Uses) (binders, refractory, for increased strength and slagging resistance)				
IT	1300-71-6 RL: USES (Uses) (distn. fraction contg., binders contg., refractory, for increased strength and slagging resistance)				

L1 ANSWER 37 OF 76 CA COPYRIGHT 2001 ACS  
AN 104:112593 CA  
TI Structure of neutral oxygen-containing compounds from primary brown coal tars of the Kansk-Achinsk Basin.  
AU Platonov, V.; Klyavina, O.; Tabolenko, N.; Ivleva, L.  
CS Tul. Gos. Pedagog. Inst., Tula, USSR  
SO Eesti NSV Tead. Akad. Toim., Keem (1986), 35(1), 25-33  
CODEN: ENTKDR; ISSN: 0201-8128  
DT Journal  
LA Russian  
CC 51-22 (Fossil Fuels, Derivatives, and Related Products)  
AB Tars from the Kansk-Achinsk Basin brown coals contain quinones 0.03-0.95, ketones 0.17-2.30, phenols trace-.80, alkoxy groups-contg. compds. 0.02-0.30, esters + lactones 0.03-0.40, and ring O compds. 0.05-0.30. On

the basis of the IR, UV, NMR spectroscopic data, anal., and gas chromatog.-mass spectrometry data hypothetical structures and empirical formulas of these O-contg. lignite constituents are proposed.

ST lignite tar oxygen compd; quinone ketone **phenol tar** lignite; alkoxy compd ester tar lignite; lactone heterocyclic oxygen tar lignite

IT Hydrocarbons, analysis  
RL: ANST (Analytical study)  
(alkoxy-group contg., detn. of in brown coal tar)

IT Esters, analysis  
Ketones, analysis  
Lactones  
Phenols, analysis  
Quinones  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, in brown coal tar)

IT Tar  
RL: USES (Uses)  
(brown-coal, oxygen-contg. compds. of)

IT 7782-44-7D, compds.  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, in brown coal tar)

L1 ANSWER 38 OF 76 CA COPYRIGHT 2001 ACS  
AN 104:36842 CA  
TI Purification of tar acids  
IN Akamine, Ryoji; Nagatomi, Yuji; Matsuo, Tadayoshi  
PA Nippon Steel Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C10C001-00  
CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60192790	A2	19851001	JP 1984-48134	19840315
	JP 02044872	B4	19901005		

AB Crude tar acids are refined by washing carboxylic acids with 5-30% aq. alkali carbonate and then removing basic impurities with cation exchange resins. Thus, 100 wt. parts tar acid contg. water 15, pitch 4, carboxylic acids 3619, and tar bases 1890 ppm were mixed with 10 wt. parts 20% aq. Na<sub>2</sub>CO<sub>3</sub> to pH 10.1, sepd. from aq. phase, distd. to sep. b. >250.degree. fractions, passed 3 h through Dia. on HPK 25 (at 0.7 mg/mL-resin), oxidized with H<sub>2</sub>O<sub>2</sub>, and distd. to obtain a purified product contg. PhOH 31, o-cresol 13, m- and p-cresol 34, and xylenol 22 wt. parts, each contg. carboxylic acids <30, tar bases <10, and thiols <20 ppm.

ST tar acid purifn; carboxylic acid removal tar acid; **phenol tar acid purifn**

IT Tar acids  
RL: PUR (Purification or recovery ; PREP (Preparation)  
(purifn. of, by washing with aq. alkali carbonates and passage through cation-exchange resins)

IT 497-19-8, uses and miscellaneous  
RL: USES (Uses)  
(washing of tar acids with, for purifn. of phenols)

L1 ANSWER 39 OF 76 CA COPYRIGHT 2001 ACS  
AN 103:217997 CA  
TI Possibility of use of heavy scrubber tar obtained in the rapid pyrolysis of lignites  
AU Vylkov, V.; Georgiev, I.; Ganchev, I.; Kaloyancheva, K.

CS MNIPKI "Minproekt", Sofia, Bulg.  
SO Koks, Smola, Gaz (1985), 30(2), 28-30  
CODEN: KSMGAA; ISSN: 0023-2823  
DT Journal  
LA Polish  
CC 51-19 (Fossil Fuels, Derivatives, and Related Products)  
AB Heavy tar [Conradson C 31, asphaltenes 35.1, phenols 30.2%,  
solidification  
temp. 51.degree., distn. 120-270.degree. (12.6% distd.)] from the rapid  
pyrolysis of lignites was subjected to destructive distn. to give 40%  
liqs. and 55% pitch which could be used as fuel. The liqs. were distd.  
to  
give 4 fractions b. ltoreq.180.degree., 180-270.degree.,  
270-320.degree.,  
and >320.degree.. The 270-320.degree. fraction contained 34.25% phenols  
of which 35% were cresols.  
ST lignite pyrolysis tar destructive distn; **phenol tar**  
lignite pyrolysis  
IT Phenols, preparation  
RL: PREP (Preparation)  
(recovery of, from tars in lignite pyrolysis)  
IT Tar  
RL: PROC (Process)  
(brown-coal, destructive distn of, phenols from)  
IT 90-00-6P 95-48-7P, preparation 95-65-8P 105-67-9P 108-68-9P  
108-95-2P, preparation 526-75-0P 875-85-4P 1319-77-3P  
RL: PREP (Preparation)  
(recovery of, from tars in lignite pyrolysis)

L1 ANSWER 40 OF 76 CA COPYRIGHT 2001 ACS  
AN 100:193854 CA  
TI Study of phenolic compounds from the low-boiling fractions of pine tar  
oil  
AU Zhu, Liangfeng; Xu, Xinmin; Deng, Changming; Lu, Biyao  
CS South China Inst. Bot., Acad. Sin., Canton, Peop. Rep. China  
SO Linchan Huaxue Yu Gongye (1983), (3), 32-6  
CODEN: LHYGD7; ISSN: 0253-2417  
DT Journal  
LA Chinese  
CC 43-9 (Cellulose, Lignin, Paper, and Other Wood Products)  
Section cross-reference(s): 80  
AB Ten phenolic compds. in the low-boiling fractions of pine tar oil,  
obtained by dry distn. of the stumps of Pinus massoniana, were quant.  
detd. by gas-liq. chromatog. as follows: phenol [108-95-2] 9.4, o-cresol  
[95-48-7] 3.7, p-cresol [106-44-5] 6.8, m-cresol [108-39-4] 5.4,  
guaiacol [90-05-1] 21.2, 2,4-xyl-enol [105-67-9] 2.5, 3,5-xyl-enol  
[108-68-9] 4.0, 4-methylguaiacol [93-51-6] 30.6, 4-ethylguaiacol  
[2785-89-9] 12.1 and 4-propylguaiacol [2785-87-7] 3.7%.  
ST phenol detn pinewood tar oil; cresol detn pinewood tar oil; guaiacol detn  
pinewood tar oil; xyl-enol detn pinewood tar oil; alkylguaiacol detn  
pinewood tar oil; chromatog detn **phenol tar oil**  
IT Tar oils  
(pine stump, phenols in, chromatog. detn. of)  
IT 90-05-1 93-51-6 95-48-7, analysis 105-67-9 106-44-5, analysis  
108-39-4, analysis 108-68-9 108-95-2, analysis 2785-87-7  
2785-89-9  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, in tar oils of Pinus massoniana stumps, chromatog.)

L1 ANSWER 41 OF 76 CA COPYRIGHT 2001 ACS  
AN 98:190862 CA  
TI Extraction-spectrophotometric determination of niobium at microgram level  
in ores with 5-Br-PADAP  
AU Wu, Manjun  
CS Inst. Rock Anal., Chinese Acad. Geol. Sci., Peop. Rep. China

SO Yankuang Ceshi (1982), 1(3), 56-6.  
 CODEN: YACEDJ  
 DT Journal  
 LA Chinese  
 CC 79-6 (Inorganic Analytical Chemistry)  
 AB A spectrophotometric method for detn. of Nb as a Nb-Br-PADAP  
 (2-(5-bromo-2-pyridylazo)-5-(diethylamino)phenol)  
 tartrate complex after extn. with BuOH is described. The  
 interference of Ta is eliminated by increasing the amts. of tartaric  
 acid,  
 and the color is stable for .gtoreq.40 h. The detection limit is 0.01  
 .mu.g/mL, and the relative std. deviation is 4.9% for 10 detns. of a  
 sample contg. 0.054% Nb2O5.  
 ST niobium detn ore extn spectrophotometry; pyridylazoaminophenol reagent  
 niobium detn; tartaric acid reagent niobium detn; ore analysis niobium  
 spectrophotometry  
 IT Iron ores, analysis  
 Ores and Ore deposits  
 Silicates, analysis  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (niobium detn. in, by extn. and spectrophotometry)  
 IT Iron ores, analysis  
 (manganese titanium-, niobium detn. in, by extn. and  
 spectrophotometry)  
 IT 7440-03-1, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, in ores, bromopyridylazodiethylaminophenol in  
 extn.-spectrophotometric)  
 IT 14337-53-2 87-69-4, uses and miscellaneous  
 RL: ANST (Analytical study)  
 (in detn. of niobium by extn. and spectrophotometry)  
 IT 87-69-4D, niobium complexes 7440-03-1D,  
 bromopyridylazodiethylaminopheno  
 l complexes 14337-53-2D, niobium complexes  
 RL: PRP (Properties)  
 (spectra of)

L1 ANSWER 42 OF 76 CA COPYRIGHT 2001 ACS  
 AN 98:74257 CA  
 TI Recovering phenols from tars  
 IN Heyberger, Ales; Horacek, Jan; Prochazka, Jaroslav; Gopoldova, Miluse;  
 Kubicka, Rudolf; Kvapil, Zdenek  
 PA Czech.  
 SO Czech., 6 pp.  
 CODEN: CZXXA9  
 DT Patent  
 LA Czech  
 IC C07C037-72  
 ICA C07C039-02  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 210578	B	19820129	CS 1980-3000	19800429
AB	A flow sheet is given and a process is described for recovery of phenols from phenol-contg. tar distn. fractions. The fraction is extracted by a counter-current method with satd. phenolate lye and aq. NaOH in a vibrating column, and the resulting oversatd. lye is treated with crude phenol-cresol mixt. from BuOAc-extn. of phenol-contg. wastewaters and extd. with hexane and PhMe. The ext. is refined by countercurrent feeding of aq. H2SO4, and the solvents are stripped by distn. The process is applicable to materials rich in xylenols and N-contg. bases.				
ST	extn phenol tar; xylenol extn tar lye extn phenol tar				



IT Tar  
RL: USES (Uses)  
(coking and gas plant , phenol contg. distn. fraction from, extn. of phenols from)

IT Phenols, preparation  
RL: PREP (Preparation)  
(extn. of, from tars)

IT Lyes  
RL: USES (Uses)  
(in extn. of phenols from tar)

IT 108-95-2P, preparation 1300-71-6P 1319-77-3P  
RL: PREP (Preparation)  
(extn. of, from tars)

L1 ANSWER 43 OF 76 CA COPYRIGHT 2001 ACS  
AN 97:219124 CA  
TI Methods of **phenol tar** utilization developed in the  
Institute of Industrial Chemistry  
AU Pawlikowska, Danuta  
CS Inst. Chem. Przem., Warsaw, Pol.  
SO Przem. Chem. (1982), 61(8), 251-4  
CODEN: PRCHAB; ISSN: 0033-2496  
DT Journal; General Review  
LA Polish  
CC 51-0 (Fossil Fuels, Derivatives, and Related Products)  
AB A review with 11 refs. The uses of phenolic tars from coking plants for impregnation of wood products, addn. to road asphalts, and as a source of chems. are described.  
ST review phenolic tar coking plant; wood impregnation phenolic tar review; road asphalt phenolic tar review  
IT Wood  
(coal tar impregnation of)

IT Asphalt  
RL: USES (Uses)  
(extenders for, with coal tar)

IT Tar  
RL: USES (Uses)  
(coal, uses of)

L1 ANSWER 44 OF 76 CA COPYRIGHT 2001 ACS  
AN 97:8866 CA  
TI Capillary gas chromatographic studies of tar from flash pyrolysis of Shulan brown coal  
AU Dong, Zhenwen; Sun, Zhuolian; Nie Hengri  
CS Dep. Chem. Eng., Dalian Inst. Technol., Dalian, Peop. Rep. China  
SO Dalian Gongxueyuan Xuebao (1981), 20(4), 29-37  
CODEN: TKHPDO  
DT Journal  
LA Chinese  
CC 51-21 (Fossil Fuels, Derivatives, and Related Products)  
Section cross-reference(s): 80  
AB Tar samples were obtained by the flash pyrolysis of the Shulan brown coal at 700.degree. and the pyrolysis of bituminous coal at 1000.degree.. The samples were either fractionated by distn. or extd. with CS2 to obtain  
tar  
oils for chromatog. anal. The brown coal-based oil comprised 42.9 and 24.31% portions b. .ltoreq.280 and .ltoreq.245.degree., resp., compared with 20.6 and 16.83% for the bituminous coal-based oil, resp. Comparatively, the brown coal-based oil had more lower phenols and less naphthalene [91-20-3].  
ST tar oil gas chromatog compn; brown coal tar oil compn; **phenol tar oil chromatog**; naphthalene tar oil chromatog; pyrolysis coal tar oil compn  
IT Tar oils  
(compn. of, chromatog. detn. of, from brown and bituminous coals)

IT Phenols, uses and miscellaneous  
 RL: USES (Uses)  
 (in tar oils, from flash pyrolysis of brown and bituminous coals)

IT Chromatography, gas  
 (of tar oils, from flash pyrolysis of brown and bituminous coals)

IT Thermal decomposition  
 (flash, of brown and bituminous coals, compn. of tar oils from)

IT 91-20-3, uses and miscellaneous  
 RL: USES (Uses)  
 (in tar oils, from flash pyrolysis of brown and bituminous coals)

L1 ANSWER 45 OF 76 CA COPYRIGHT 2001 ACS  
 AN 96:222675 CA  
 TI Composition of phenols of pyrolysis tar of solid household wastes  
 AU Makeikina, V. V.; Titova, N. A.; Gav'yalov, V. G.; Vagina, L. K.  
 CS Vses. Nauchno-Issled. Inst. Neftekhim. Protsessov, USSR  
 SO Khim. Tverd. Topl. (Moscow) (1982, (2), 140-2  
 CODEN: KTVTBY; ISSN: 0023-1177  
 DT Journal  
 LA Russian  
 CC 60-5 (Waste Treatment and Disposal)  
 AB Phenols extd. from solid waste-pyrolysis tar have low mol. mass and high  
 O concns., which indicates that they contain dihydroxy-derivs. of benzene  
 and do not contain alkyl-substituted phenols with long side chains.  
 Phenol fractions considerably differ in their yields. The fractions b.  
 at 180-240.degree. and 240-280.degree. contain methoxyphenols. The  
 180-240.degree. fraction also contains o-cresol [95-48-7], m-cresol  
 [108-39-4], np-cresol [106-44-5] xylenols, and phenol [108-95-2]. The  
 presence of methoxyphenols and diat. phenols is also possible. This  
 fraction can be processed by the methods used for similar phenol  
 fractions  
 of coal, shale, and wood tars.

ST **phenol tar** solid waste pyrolysis; pyrolysis waste tar  
 phenol compn

IT Phenols, properties  
 RL: PRP (Properties)  
 (compn. of, of tar from household solid waste pyrolysis)

IT Waste solids  
 (garbage, pyrolysis of, tar from, phenol in)

IT Tar  
 RL: PROC (Process)  
 (pyrolysis, phenols in, from household waste)

IT 95-48-7, uses and miscellaneous 106-44-5, uses and miscellaneous  
 108-39-4, uses and miscellaneous 108-95-2, uses and miscellaneous  
 1300-71-6D, isomers  
 RL: USES (Uses)  
 (in household waste pyrolysis tar)

IT 71-43-2D, dihydroxy derivs.  
 RL: PROC (Process)  
 (of tar from household waste pyrolysis)

L1 ANSWER 46 OF 76 CA COPYRIGHT 2001 ACS  
 AN 95:9599 CA  
 TI Possibilities of the use of phenolic tars as supplementary fuel for  
 oil-fueled steam boilers  
 AU Kapitaniak, Jadwiga; Nowakowski, M; Madeusz  
 CS Zakl. Ochr. Urzqdzen Srodowiska, Pol.  
 SO Gospod. Paliwami Energ. (1980), 2(11), 31-2  
 CODEN: GPENAS; ISSN: 0017-2413  
 DT Journal  
 LA Polish  
 CC 51-10 (Fossil Fuels, Derivatives, and Related Products)  
 AB Waste tar (contg. C 83.55, H 7.19 S 0.5, O 7.56, and ash 1.2%, heating

the value 8320 kcal/kg, viscosity at 20.degree. 77 .times. 10-6 m2/s) from  
the prodn. of PhOH [108-95-2] was burned in oil-burning boilers. It was  
recommended to preheat the tar to 110.degree. before burning  
simultaneously with oil in a boiler but in a sep. burner.

ST phenol tar fuel oil boiler

IT Tar

RL: USES (Uses)

(from phenol prodn., for boiler firing with fuel oil)

IT Firing of furnaces

(with fuel oil-phenol tar mixt )

IT 108-95-2P, preparation

RL: PREP (Preparation)

(prodn. of, tar from, as boiler fuel)

L1 ANSWER 47 OF 76 CA COPYRIGHT 2001 ACS

AN 95:6811 CA

TI Recovery of cumene and phenol from phenol tar produced  
in phenol manufacture by the cumene method

IN Pawlikowska, Matylda Danuta; Zieborak, Kazimierz

PA Instytut Chemii Przemyslowej, Pol

SO Pol., 3 pp.

CODEN: POXXA7

DT Patent

LA Polish

IC C07C039-04; C07C037-08

CC 25-10 (Noncondensed Aromatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	PL 108483	B2	19800430	PL 1977-201688	19771022
AB	PhOH and cumene were recovered from title tar by simultaneous hydrogenation of the .alpha.-methylstyrene and cracking of the cumylphenol contained therein. Thus, 5 L tar 60 g Ca stearate, 100 g catalyst contg. 5.5 WO3, 4.5 NiO and 90% Al2O3 were hydrogenated 3.5 h at the 140.degree./10 atm to give an 89.6% consumption of cumylphenol and 99.5% consumption of .alpha.-methylstyrene; product recovery was conventional.				
ST	cumene phenol recovery tar				
IT	98-82-8P	108-95-2P,	preparation		
	RL: PREP (Preparation)				
	(recovery of, from phenol tar)				

L1 ANSWER 48 OF 76 CA COPYRIGHT 2001 ACS

AN 94:25849 CA

TI Toxicological characteristics of commercial shale products prepared from  
phenol and tar bases

AU Blinova, E. A.; Janes, H.

CS USSR

SO Sb. Nauch. Tr. In-t Eksperim. i Klinich. Med. M-va Zdravookhr. ESTSSR  
(1980), (10), 187-90

From: Ref. Zh., Khim. 1980, Abstr No. 19I537

DT Journal

LA Russian

CC 4-3 (Toxicology)

AB Title only translated.

ST oil shale phenol tar toxicity

IT Toxicity

(of oil shale products, from phenol and tar bases)

IT Phenols, biological studies

Tar

RL: BIOL (Biological study)

(oil shale products from, toxicity of)

IT Shale oils

(toxicity of)  
IT Oil shale  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(toxicity of, from phenol and tar bases)

L1 ANSWER 49 OF 76 CA COPYRIGHT 2001 ACS  
AN 93:130759 CA  
TI Methods for removing tars from smoke  
AU Kurko, V. I.; Makarova, N. A.; Gengel, B. E.  
CS Vses. Nauchno-Issled. Inst. Rybn. Khoz. Okeanogr., Moscow, USSR  
SO Rybn. Khoz. (Moscow) (1980), (7), 66-9  
CODEN: RYKHAK  
DT Journal  
LA Russian  
CC 17-2 (Foods)

AB An app. is described for removing tarry phenols from smoke prior to its application to food. The smoke is piped into a chamber divided into 2 parts and partially filled with water. The smoke is blown against the water surface in 1 part of the chamber, then passed through an opening in the partition and directed toward the water surface in the other part. Cresol [1319-77-3] was removed by >50% by this method, whereas other phenols, including the guaiacols, remained essentially unchanged.

ST **phenol tar removal smoke**  
IT Phenols, uses and miscellaneous  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from smoke flavoring material, app. for)

IT Flavoring materials  
(smoke, tars removal from, app. for)

IT 1319-77-3  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from smoke flavoring material, app. for)

L1 ANSWER 50 OF 76 CA COPYRIGHT 2001 ACS  
AN 92:168077 CA  
TI Raw material mixture for a porous aggregate for concretes  
IN Knippenberg, A. K.; Solomatov, V. I.; Korneev, A. D.  
PA Lipetsk Polytechnic Institute, USSR  
SO U.S.S.R.  
From: Otkrytiya, Izobret., Prom. Obrazttsy, Tovarnye Znaki 1980, (5), 71.  
CODEN: URXXAF  
DT Patent  
LA Russian  
IC C04B013-30  
CC 58-2 (Cement and Concrete Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 713843	T	19800205	SU 1978-2623914	19780602

AB The aggregate manufg. technol. was simplified by adding 1 wt. part PhOH to the raw material mixt. contg. 1-3 wt. parts acid tar and the raw material mixt. was ground followed by heat treatment of granules at 120-140.degree. for 4-8h.

ST **phenol tar concrete aggregate**  
IT Concrete  
(aggregates manuf. for, acid tar and phenol in granulation of)

IT Tar acids  
RL: USES (Uses)  
(in aggregate granulation for concrete)

IT 108-95-2, uses and miscellaneous  
RL: USES (Uses)  
(in aggregate granulation, for concrete)

L1 ANSWER 51 OF 76 CA COPYRIGHT 2001 ACS

AN 91:62066 CA  
 TI Adsorption supplemental purification of waste water in the coking  
 by-product industry  
 AU Kel'tsev, A. V.; Korolev, Yu. G.; Syskov, K. I.; Golubev, V. N.  
 CS USSR  
 SO Tr. - Mosk. Khim.-Tekhnol. Inst. im. D. I. Mendeleeva (1977), 93, 79-86  
 CODEN: TMKIAT; ISSN: 0371-9723  
 DT Journal  
 LA Russian  
 CC 60-2 (Sewage and Wastes)  
 Section cross-reference(s): 51  
 AB The sorption capacity of active C. with respect to phenols, was studied  
 using C of different degrees of activation (macropore vol. 0.275-0.330  
 cm<sup>3</sup>/g). Coke-plant wastewater, before and after flotation treatment, and  
 artificial solns. were used. The micropores are dominant in removing  
 phenols, whereas macropore adsorption removes the tar and tar oils.  
 ST coke byproduct manuf wastewater treatment; activated carbon coke  
 byproduct  
 wastewater; **phenol tar** removal wastewater; tar oil  
 removal wastewater  
 IT Carbonization and Coking  
 (byproduct manuf. in, treatment of wastewater from, adsorption  
 capacity  
 of activated carbon in relation to)  
 IT Tar oils  
 (removal of, from wastewater from manuf. of coking byproducts,  
 adsorption capacity of activated carbon in relation to)  
 IT Phenols, uses and miscellaneous  
 Tar  
 RL: REM (Removal or disposal); PROC (Process)  
 (removal of, from wastewater from manuf. of coking byproducts,  
 adsorption capacity of activated carbon in relation to)  
 IT Wastewater treatment  
 (adsorption, phenol and tar and tar oil removal by, of effluent from  
 manuf. of coking byproducts, adsorption capacity of activated carbon  
 in  
 relation to)  
 IT 7440-44-0, properties  
 RL: PRP (Properties)  
 (activated, adsorption capacity of, treatment of wastewater from  
 manuf.  
 of coking byproducts in relation to)  
  
 L1 ANSWER 52 OF 76 CA COPYRIGHT 2001 ACS  
 AN 88:25393 CA  
 TI Group analysis of coal-tar phenols by a mass-spectrometric method  
 AU Kogan, L. O.; Lavrent'ev, V. G.; Lupan, A. P.; Nekhamkina, L. G.;  
 Polyakova, A. A.  
 CS USSR  
 SO Tr. VNII po Pererabotke Nefti (1976), (19), 17-22  
 From: Ref. Zh., Khim. 1977, Abstr. No. 19G253  
 DT Journal  
 LA Russian  
 CC 51-25 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 80  
 AB Title only translated.  
 ST **phenol tar** mass spectrometry  
 IT Phenols, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, in coal tar, by mass spectrometry)  
 IT Mass spectroscopy  
 (in phenols detn. in coal tar)  
 IT Tar  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (phenol detn. in, by mass spectrometry)

L1 ANSWER 53 OF 76 CA COPYRIGHT 2001 ACS  
 AN 87:186986 CA  
 TI Analysis of tar phenols by gas chromatography  
 AU Bermejo, J.; Gayol, O. M.  
 CS Inst. Nac. Carbon Derivados, CSIC Spain  
 SO Ion (Madrid) (1977), 37(428), 139-45  
 CODEN: IONMAH  
 DT Journal  
 LA Spanish  
 CC 51-25 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 80  
 AB Gas chromatog. of C6-8 phenols in tar on columns of Bentone 34 or Chromosorb W, AW, or DMCS coated with tris(2,4-xylenyl) phosphate, diisodecyl phthalate, or silicone oil SE-30 is described. The phenols were converted to trimethylsilyl ethers before chromatog. No column gave complete resoln. of mixts. of all 13 phenols, but nearly all were suitable for anal. of industrial mixts. For complete anal., a combination of distn. and chromatog. is used.  
 ST **phenol tar** gas chromatog  
 IT Phenols, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, in tar by gas chromatog.)  
 IT Chromatography, gas  
 (of phenols, in tar, columns for)  
 IT Tar  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (phenols detn. in, by gas chromatog.)  
 IT 90-00-6 95-48-7, analysis 95-65-8 95-87-4 105-67-9 106-44-5, analysis 108-39-4, analysis 108-68-9 108-95-2, analysis 123-07-9 526-75-0 576-26-1 620-17-7  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, in tar by gas chromatog.)

L1 ANSWER 54 OF 76 CA COPYRIGHT 2001 ACS  
 AN 87:87615 CA  
 TI Ultraviolet spectroscopic analysis of phenols in tar  
 AU Bermejo, J.; Gayol, O. M.  
 CS Inst. Nac. Carbon Derivados "Francisco Pintado Fe", Oviedo, Spain  
 SO Ion (Madrid) (1976), 36(425), 721-3  
 CODEN: IONMAH  
 DT Journal  
 LA Spanish  
 CC 51-25 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 80  
 AB Phenols are detd. in tar by chromatog. on HCONH2-impregnated cellulose and UV spectroscopy of the resulting fractions.  
 ST phenol detn tar; chromatog **phenol tar**; UV spectroscopy **phenol tar**  
 IT Phenols, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, in tar, by chromatog. and UV spectroscopy)  
 IT Tar  
 RL: AMX (Analytical matrix); ANST (Analytical study)  
 (phenol detn. in, by chromatog and UV spectroscopy)

L1 ANSWER 55 OF 76 CA COPYRIGHT 2001 ACS  
 AN 86:194774 CA  
 TI Research on the water quality of the river Taro in the Fornovo-mouth tract  
 AU Bellelli, E.; Bracchi, U.; Sansebastiano, G.  
 CS Ist. Ig., Univ. Parma, Parma, Italy  
 SO Ateneo Parmense, Acta Nat. (1976) 12(3), 213-38

CODEN: ATPNAB  
 DT Journal  
 LA Italian  
 CC 61-1 (Water)  
 Section cross-reference(s): 60  
 AB The studies were made during December, 1972-November, 1973, with emphasis on org. matter, phenol, and microorganism content. Between the confluence of the tributary Ceno and the S. Quirico bridge, the org. contamination was low but the bacterial count at 20 and 37.degree. and the total and fecal coliforms were high. Downstream of the Stirone most of the pollutants increased significantly. The most polluted loads (org. matter and phenols) were between S. Quirico and the mouth of the Taro, and they were conveyed by the Stirone; the bacterial count was high upstream and higher than the permissible concn. for recreational use.  
 ST org matter Taro River Italy; **phenol** Taro River Italy; microorganism Taro River Italy; river water pollution Italy  
 IT Water pollution  
     (by org. matter and phenol)  
 IT Organic matter  
     (water pollution by, in Taro River, Italy)  
 IT 108-95-2, biological studies  
 RL: POL (Pollutant); OCCU (Occurrence)  
     (water pollution by, in Taro River, Italy)  
 L1 ANSWER 56 OF 76 CA COPYRIGHT 2001 ACS  
 AN 86:174547 CA  
 TI Nuclear magnetic resonance study of the tar composition of Baltic shales  
 AU Fainberg, V. S.  
 CS Leningr. Inzh.-Ekon. Inst. im. To 'yatti, Leningrad, USSR  
 SO Deposited Doc. (1974), VINITI 194.-74, 12 pp. Avail.: BLLD  
 DT Report  
 LA Russian  
 CC 53-5 (Mineralogical and Geological Chemistry)  
 Section cross-reference(s): 21  
 AB NMR spectra are presented for the tar as a whole and its phenols, hydrocarbon conc., and conc of neutral O-contg. compds. (NOC). The hydroxyl group of the tar mols. occurs in phenol compds. and the carboxyl group in ketones. Derivs. of these 2 groups consist mainly of NOC. Signals from protons of the aryl ring, alkenes and hydroxyl groups, and methyl-methylene groups are well resolved in all spectra. The C and H atoms in various groups of neutral mols. of the NOC and phenols are calcd.  
 The aromatic cycles of the phenols and NOC have a large no. of substitutions (av. .gtoreq.4). Arom. cycles of the NOC are primarily mononuclear. Naphthols and other multinuclear compds. comprise .ltoreq.30% of the total phenols of a given fractions. The no. of arom. structures in insignificant. The absence of significant amts. of aldehydes and of alcs. and various types of esters is established. The presence of alkylfuran, reported by O.G. Eizen (1957) in shale tar, cannot be excluded.  
 ST tar shale NMR Baltic; **phenol** tar shale Baltic;  
 IT hydrocarbon tar shale Baltic; org compd tar shale  
 IT Shale  
 RL: PRP (Properties)  
     (compn. of tar in, NMR in relation to, of Baltic region, USSR)  
 IT Hydrocarbons, occurrence  
 Naphthols  
 Phenols, occurrence  
 RL: OCCU (Occurrence)  
     (in shale tar, of Baltic region, USSR)  
 IT Nuclear magnetic resonance  
     (of tar, in shale)

IT Shale oils  
(tars from, NMR of, of Baltic Region, USSR)

L1 ANSWER 57 OF 76 CA COPYRIGHT 2001 ACS  
AN 86:73748 CA  
TI Curing agents for epoxy resins  
IN Akagane, Katsuo; Suekawa, Masamichi; Kamio, Kunimasa  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Japan. Kokai, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC C08G059-50  
CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51123300	A2	19761027	JP 1975-48884	19750421
	JP 57014694	B4	19820326		

AB 4,4'-Diaminodiphenylmethane (I) [101-77-9] tar is mixed with a phenol tar, melted, and emulsified in the presence of H2O, emulsifiers, and protective colloids to give an oil-in-water emulsion

useful as curing agent for an epoxy resin. Thus, a mixt. of 100 parts I tar and 50 parts cresol (II) [131-77-3] tar was melted at 90.degree., allowed to stand at 50.degree., mixed with an aq. soln. contg. 14 parts emulsifier and 26 parts H2O, and 50 parts H2O, stirred, mixed with 100 parts Sumikaflex 400 and 60 parts H2O to give an oil-in-water emulsion of which 100 parts was mixed with an epoxy emulsion obtained from Sumiepoxy ELA 115 [61642-77-1] 100, Emulgen A 90 7, and H2O 93 parts, coated on a glass plate and cured at room temp. in 24 h compared with 30 h for a control when bituminous tar instead of II tar was used under the same conditions.

ST curing agent epoxy resin; methylphenylmethane tar curing agent; cresol tar

curing agent

IT Epoxy resins, uses and miscellaneous

RL: USES (Uses)

(curing agents for)

IT Crosslinking agents

(dimethyldiphenylmethane tar-cresol tar emulsions, for epoxy resins)

IT Emulsions

(oil-in-water, dimethylphenylmethane tar-cresol tar, curing agents for epoxy resins)

IT 61642-77-1

RL: USES (Uses)

(curing agents for)

IT 101-77-9 1319-77-3

RL: USES (Uses)

(tar, curing agents contg., for epoxy resins)

L1 ANSWER 58 OF 76 CA COPYRIGHT 2001 ACS

AN 85:126059 CA

TI Study of the tar water produced during the pyrolysis of lignin and charge briquets

AU Gladkova, N. Ya.; Gracheva, E. V.

CS Sib. Tekhnol. Inst., Krasnoyarsk, USSR

SO Khim. Khim. Tekhnol. Drev. (1975) 3, 19-23

CODEN: KKTDDH

DT Journal

LA Russian

CC 43-5 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 80

AB The compn. of tar water, obtained during the pyrolysis of lignin [9005-53-2] and charge briquets at 400-600.degree., was detd. by gas-liq.



chromatog. The main phenols identified in the tar water are: pyrocatechol PhOH, m- and p-cresol, and guaiacol. Of the 14 org. acids identified in the tar water, the main components, accounting for 60-70% of the total acid compn., are AcOH and EtCO<sub>2</sub>H.

ST lignin pyrolysis tar water; **phenol tar** water lignin; acetic acid tar water; propionic acid tar water

IT Carboxylic acids, analysis  
Phenols, analysis  
RL: ANST (Analytical study)  
(identification of, in condensed water of lignin pyrolysis)

IT 9005-53-2, uses and miscellaneous  
RL: USES (Uses)  
(condensed water of pyrolysis of, compn. of)

L1 ANSWER 59 OF 76 CA COPYRIGHT 2001 ACS  
AN 85:125996 CA  
TI Thermosetting naphthalene-formaldehyde-phenol resin  
IN Robinson, Joseph Gordon; Rogers, Edward Aubrey  
PA Coal Industry (Patents) Ltd., Eng.  
SO Ger. Offen., 10 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC C08G008-28  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2600629	A1	19760722	DE 1976-2600629	19760109
	US 4038236	A	19770726	US 1975-643914	19751223
	BE 837493	A1	19760712	BE 1976-163455	19760112
	FR 2297867	A1	19760813	FR 1976-856	19760114
	JP 51096884	A2	19760825	JP 1976-2923	19760114
	AU 7610288	A1	19770721	AU 1976-10288	19760114
	NL 7600386	A	19760719	NL 1976-386	19760115
PRAI	GB 1975-1708		19750115		

AB Heat-curable resol-type resins are prep'd. by treating a mixt. of a tar acid and a phenolated naphthalene-formaldehyde resin (I) [25852-26-0] with HCHO and are used as coatings in H<sub>2</sub>O-resistant laminates. Thus, 25 parts PhMe soln. (10 parts resin) of O-contg. I, prep'd. by treating naphthalene with HCHO in the presence of H<sub>2</sub>SO<sub>4</sub>, was mixed with 9.2 parts PhOH and 0.03 parts p-toluenesulfonic acid and heated at 95.degree. to form phenolated I. After 2 hr reaction time, NH<sub>3</sub> 3.7, crude tar acid 26.4, and formalin 45.5 parts were added and the mixt. heated at 95.degree. for 1.5 hr. A methyl isobutyl ketone soln. of the resin was prep'd. and used to coat packing paper. After curing 2-6 min at 135.degree., sheets of the treated paper were pressed together at 140-80.degree. and 690 .times. 104N/m<sup>2</sup> to give laminates having H<sub>2</sub>O absorptn 28 mg, dielec. loss tangent 0.024, and dielec. const. 4.5 at 51% resn in the laminate.

ST naphthalene formaldehyde resin phenolated; tar acid coating resin; paper laminate waste resistant

IT Paper  
(coating of, with naphthalene-formaldehyde-**phenol-tar** acid resins, for water-resistant laminates)

IT Coating materials  
(naphthalene-formaldehyde-**phenol-tar** acid resins, for water-resistant laminates)

IT Tar acids  
RL: USES (Uses)  
(reaction products with phenolated naphthalene-formaldehyde resins, as coatings for water-resistant laminates)

IT and Naphthalene, polymer with formaldehyde, reaction products, with phenol  
tar acids  
Phenol, reaction products with naphthalene-formaldehyde resin and tar acids  
RL: USES (Uses)  
(coating materials, for water-resistant laminates)

L1 ANSWER 60 OF 76 CA COPYRIGHT 2001 ACS  
AN 85:80715 CA  
TI Dephenolization of tar water using standard extraction columns  
AU Shuleshov, E. I.; Papkov, G. I.; Grinshpun, V. E.; Samoilov, A. L.  
CS USSR  
SO v sb., Vopr. Tekhnol. Ulavlivaniya i Pererab. Produktov Koksovaniya, M. (1975), (4), 43-9  
From: Ref. Zh., Khim. 1976, Abstr No. 2P67  
DT Journal  
LA Russian  
CC 51-25 (Fossil Fuels, Derivatives, and Related Products)  
AB Title only translated.  
ST phenol removal tar water; extn **phenol tar water**  
IT Tar  
RL: USES (Uses)  
(phenol removal from water cong., by extn.)  
IT Waste water treatment  
(phenol removal, from tar water by extn.)  
IT Phenols, uses and miscellaneous  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from tar water, by extn.)

L1 ANSWER 61 OF 76 CA COPYRIGHT 2001 ACS  
AN 84:121452 CA  
TI Obtaining phenol, cumene, and .alpha.-methylstyrene by cracking residues from the distillation production of decomposition products of cumene hydroperoxide  
IN Bartkowiak, Horst; Grosser, Andreas; Haase, Bernd; Kiessling, Wolf; Reinsberger, Gerd; Roschka, Erhard; Uebel, Hans J.; Hessler, Mario; Oberender, Hermann  
PA E. Ger.  
SO Ger. (East), 5 pp.  
CODEN: GEXXA8  
DT Patent  
LA German  
IC C07C  
CC 25-10 (Noncondensed Aromatic Compounds)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 113343	Z	19750612	DD 1974-177648	19740403
AB	Cumene, PhOH, and PhCMe:CH <sub>2</sub> were recovered from the residue remaining after the distillative workup of cumene hydroperoxide decompn. products				
by	cracking the residue at 250-350.degree. in the gas phase and 1-10 atm in the presence of H and hydrogenation catalyst (Pt, Ni, Mo, W).				
ST	cumene recovery <b>phenol tar</b> ; pheno. recovery <b>phenol tar</b> ; styrene methyl recovery tar; tar phenol cracking				
IT	98-82-8P	98-83-9P,	preparation	108-95-2P,	preparation
	RL: PREP (Preparation) (recovery of, by <b>phenol tar</b> cracking)				

L1 ANSWER 62 OF 76 CA COPYRIGHT 2001 ACS  
AN 83:30631 CA  
TI Products of low-temperature processing of coals from the western Donets Basin as raw material for the chemical industry. II

AU Fomenko, O. S.; Popova, E. G.; Loxa, A. Ya.  
 CS Dnepropetr. Khim.-Tekhnol. Inst., Dnepropetrovsk, USSR  
 SO Vopr. Khim. Khim. Tekhnol. (1974) 36, 146-8  
 CODEN: VKKCAJ  
 DT Journal  
 LA Russian  
 CC 51-29 (Fossil Fuels, Derivatives, and Related Products)  
 AB Phenols were studied of low-temp. processing of coals from the western Donets Basin. Vacuum distn. (5 torr) of the phenols was carried out on the column of 20,000 theor. plate. The phenolic fraction 190.6-300.degree. was analyzed by gas-liq. chromatog. and 14 phenols were detd. Following individual phenols were detd. in the fraction: phenol [108-95-2], o-cresol [95-48-7], m-cresol [108-39-4], p-cresol [106-44-5], 2,6-xyleneol [576-26-1], 2,4-xyleneol [105-67-9], o-isopropylphenol [88-69-7], pyrocatechol [120-80-9], o-propylphenol [644-35-9], o-butylphenol [3180-09-4], 2,4,5-trimethylphenol [496-78-6], 2,3,5-trimethylphenol [697-82-5], 2,4-di-tert-butylphenol [96-76-4], 3,4,5-trimethylphenol [527-54-8] and .alpha.-naphthol [90-15-3]. Considerable amt. of low-mol.-wt. phenols (21.2%) was present in the phenolic fraction studied.  
 ST phenol detn coal tar; chromatog **phenol tar**  
 IT Phenols, analysis  
 RL: ANST (Analytical study)  
 (gas chromatog. detn. of, in coal tar)  
 IT Tar  
 RL: USES (Uses)  
 (gas chromatog. of phenols in)  
 IT Chromatography, gas  
 (in phenols detn., in coal tar)  
 IT 90-15-3  
 RL: USES (Uses)  
 (gas chromatog. detn. of, in coal tar)  
 IT 88-69-7 95-48-7 96-76-4 105-67-9 106-44-5 108-39-4 108-95-2,  
 analysis 120-80-9, analysis 496-78-6 527-54-8 576-26-1 644-35-9  
 697-82-5 3180-09-4  
 RL: USES (Uses)  
 (gas chromatog. detn. of, in tar)

L1 ANSWER 63 OF 76 CA COPYRIGHT 2001 ACS  
 AN 82:66111 CA  
 TI Anodic oxidation of articles that consist wholly or partly of aluminum or aluminum alloys  
 IN Wehrmann, Felix  
 PA Isovolta Oesterrichische Isoliersstoffwerke A.-G.  
 SO Austrian, 7 pp. Addn. to Austrian 309,942  
 CODEN: AUXXAK

DT Patent  
 LA German  
 IC C23B  
 CC 72-1 (Electrochemistry)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	AT 317626	B	19740910	AT 1972-3906	19720505
AB	The articles are treated in an alk. aq. electrolyte soln. contg. water glass and 1 or >1 Al complex formers at a temp. of 0-95.degree., a potential of 180-350 V and c.d. of 0.5-3 A/dm <sup>2</sup> , for 0.1-10 min. The preferred complex formers are: ethylene glycol, PhOH, Na tartrate, 1,2-propanediol, polyethylene glycol, monoethanolamine, and triglycol.				
ST	aluminum anodization complex formation; amine glycol aluminum complex; <b>phenol tartrate</b> aluminum anodization				
IT	Coating process (anodic, of aluminum and aluminum alloys, org. additives for)				
IT	Aluminum alloy, base RL: PRP (Properties)				

(coating of, anodic, org. additives for)  
 IT 7429-90-5, uses and miscellaneous  
 RL: USES (Uses)  
 (coating of, anodic, org. additives for)  
 IT 57-55-6, uses and miscellaneous 107-21-1, uses and miscellaneous  
 108-95-2, uses and miscellaneous 112-27-6 141-43-5, uses and  
 miscellaneous  
 RL: USES (Uses)  
 (in anodic coating, of aluminum and aluminum alloys)  
 IT 14475-11-7 25322-68-3  
 RL: PRP (Properties)  
 (in anodic coating, of aluminum and aluminum alloys)

L1 ANSWER 64 OF 76 CA COPYRIGHT 2001 ACS  
 AN 80:145755 CA  
 TI Recovery of useful components from **phenol tars**  
 IN Glew, David N.; Ollerenshaw, John E.; Somers, Ernest A.  
 PA Dow Chemical Co.  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C07C  
 NCL 260621000A  
 CC 25-10 (Noncondensed Aromatic Compounds)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3803247	A	19740409	US 1972-314790	19721213

AB Cu catalysts used in the oxidative decarbonylation of arom.  
 monocarboxylic  
 acids to produce phenols were recovered from a tar fraction by treating  
 it with a dil. aq. aliph. carboxylic acid, e.g., AcOH.  
 ST decarbonylation arom acid catalyst; phenol decarbonylation acid  
 IT Decarbonylation catalysts  
 (cupric salt or oxides, recovery of)  
 IT Phenols, preparation  
 RL: PREP (Preparation)  
 (from carboxylic acids, recovery of decarbonylation catalysts)  
 IT 533-01-7  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for decarbonylation of benzoic acid, recovery of)  
 IT 65-85-0, reactions  
 RL: RCT (Reactant)  
 (decarbonylation of, recovery of copper catalysts)  
 IT 64-19-7, uses and miscellaneous  
 RL: USES (Uses)  
 (recovery by, of copper catalysts used in decarbonylation of  
 carboxylic  
 acids)

L1 ANSWER 65 OF 76 CA COPYRIGHT 2001 ACS  
 AN 80:134859 CA  
 TI Improving electric charge controlling property of a modified polyamide  
 yarn  
 IN Nakamura, Kimio; Kojima, Tatsuji; Ikenaga, Shizuyoshi  
 PA Toray Industries, Inc.  
 SO Japan., 4 pp.  
 CODEN: JAXXAD  
 DT Patent  
 LA Japanese  
 IC B44D; D06M  
 CC 39-10 (Textiles)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 48017744	B4	19730531	JP 1970-90046	19701015
AB	Dyeings of nylon 6 fiber contg. 0.2% TiO <sub>2</sub> and poly(ethylene oxide)diamine adipate-epsilon-caprolactam copolymer [51394-53-7] [poly(ethylene oxide) segment 40% in the block copolymer and 1.5% in the fiber] were treated with aq. finish contg. 20-30:1-3:0-10 trihydroxy phenol-tartar emetic [28300-74-5]-org. acid mixt. to impart washfast antistatic properties to the dyeings. For example, a knit from the modified nylon fiber was dyed with acid, disperse, or metal-contg. acid dye or whitened and treated with a bath contg. 4% (based on fiber) trihydroxy phenol and 0.2% tartar emetic at 75-80.deg. for 20 min (bath ratio 1:50). The trihydroxy phenols were pyrogallol [87-66-1], gallic acid [149-91-7], and tannin, and org. acids were, e.g., tartaric acid [87-69-4], maleic acid [110-16-7] and malonic acid [141-82-2].				
ST	finishing nylon fiber antistatic; pyrogallol finishing nylon dyeing; gallic acid finishing nylon; tannin finishing nylon dyeing; tartar emetic finishing nylon; tartaric acid finishing nylon; maleic acid finishing nylon; malonic acid finishing nylon				
IT	Polyamide fibers RL: USES (Uses) (antistatic agents for, org. acid-tartar emetic-trihydroxybenzene compns. as)				
IT	Tannins RL: USES (Uses) (antistatic agents, for modified polyamide fibers)				
IT	Antistatic agents (org. acid-tartar emetic-trihydroxybenzene compns., for modified polyamide fibers)				
IT	Phenols, uses and miscellaneous RL: USES (Uses) (tri-, antistatic agents, for modified polyamide fibers)				
IT	87-66-1 87-69-4, uses and miscellaneous 110-16-7, uses and miscellaneous 141-82-2, uses and miscellaneous 149-91-7, uses and miscellaneous 28300-74-5 RL: USES (Uses) (antistatic agents, for modified polyamide fibers)				
IT	51394-53-7 RL: USES (Uses) (block, polyamide fibers contg., antistatic agents for, org. acid-tartar emetic-trihydroxybenzene compns. as)				
L1	ANSWER 66 OF 76 CA COPYRIGHT 2011 ACS				
AN	80:97486 CA				
TI	Polyurethane coating and sealing compositions				
IN	Okamoto, Masahiro; Kimura, Morio; Kitakyushu, Fukuoka; Shibuya, Teruo; Yamamoto, Shinji; Hasegawa, Shinichi; Terada, Yutaka; Adachi, Teruho				
PA	Sumitomo Chemical Co., Ltd.; Nittetsu Chemical Industrial Co., Ltd.				
SO	Ger. Offen., 17 pp. CODEN: GWXXBX				
DT	Patent				
LA	German				
IC	C08G; C08H; C10C				
CC	42-10 (Coatings, Inks, and Related Products)				
FAN.CNT	2				

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2329448	A1	19731220	DE 1973-2329448	19730608
	JP 49018121	A2	19740218	JP 1972-58053	19720609
	JP 51003487	B4	19760203		
	JP 49122536	A2	19741122	JP 1973-36922	19730330
	JP 51024364	B4	19760723		
	JP 49122567	A2	19741122	JP 1973-36923	19730330

	JP 51041917	B4	19761112		
	JP 49124028	A2	19741127	JP 1973-36921	19730330
	JP 52038523	B4	19770929		
	US 4018739	A	19770419	US 1975-607962	19750826

PRAI JP 1972-58053 19720609  
JP 1973-36921 19730330  
JP 1973-36922 19730330  
JP 1973-36923 19730330  
US 1973-368376 19730608

AB Polyurethane compns. for coating and sealing materials were prep'd. by condensation of tar from the cresol [1319-77-3] synthesis (cymenyl hydroperoxide process), with paraformaldehyde (I) [30525-89-4] in the presence of alk. compds., e.g. triethylamine [121-44-8], and reaction with another phenolic compd. and with bis(p-isocyanatophenyl)methane (II) [101-68-8]. Thus, a mixt. contg. tar (from the cresol synthesis) 100, m-cresol [108-39-4] 10, I 10, and Et3N 1.1 part was heated 1 hr at 110.deg. and dist. in vacuo to give a product (III) of viscosity 59 P at 25.deg. and OH content 7.15%. A soln. made from III 30, castor oil 10, creosote oil 10, toluene 10, clay 35, and red iron oxide 5 parts was mixed at 90:1 parts with a soln. of 90 parts II and 10 parts toluene, coated on a concrete surface, and hardened 1 hr to give a floor covering.

ST polyurethane tar coating compn; formaldehyde tar coating compn; **phenol tar** polyurethane; triethylamine catalyst phenol condensation; isocyanate **phenol tar** sealing

IT Castor oil  
Creosote oil  
RL: USES (Uses)  
(coatings and sealing compns. from, contg. phenolic tar-based urethane polymers)

IT Tar  
RL: USES (Uses)  
(from phenol manuf., urethane polymers from, as coatings and sealing compns.)

IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(phenolic tar-based, as coatings and sealing compns.)

IT Phenols, preparation  
RL: PREP (Preparation)  
(tar from, urethane polymers from, as coatings and sealing compns.)

IT Coating materials  
Sealing compositions  
(urethane polymers, phenolic tar-based)

IT Benzene, 1,1'-methylenebis[4-isocyanato-, reaction products with formaldehyde and phenolic tars  
Formaldehyde, reaction products with isocyanates and phenolic tars  
Phenol, 3-methyl-, reaction products with formaldehyde and isocyanates

and phenolic tars  
RL: USES (Uses)  
(as coatings and sealing compns.)

IT 121-44-8, uses and miscellaneous  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for condensation of formaldehyde and phenolic tars)

IT 1319-77-3P  
RL: PREP (Preparation)  
(tar from prepn. of, urethane polymers from, as coatings and sealing compns.)

IT 108-46-3P, preparation 108-95-2P, preparation 123-31-9P, preparation  
RL: PREP (Preparation)  
(tar from, urethane polymer from, as coatings and sealing compns.)

TI High-softening point thermoplastics containing polar groups  
 IN Ddickakian, Ghazi M.  
 PA Esso Research and Engineering Co.  
 SO Brit., 7 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 IC C08G  
 CC 36-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1329441	A	19730905	GB 1970-54821	19700925
AB	Steam-cracked tar, ball and ring softening point 5-40.deg. and no. av. mol. wt. (Mn) 175-400, was copolynd. at 120-200.deg. with HCHO and phenol [108-95-2] or maleic anhydride [108-31-6] to give resins with softening point 62-85.deg.. Thus, tar 270, paraformaldehyde 17.5, PhOH 15.0, and				
50	wt. % aq. H2SO4 heated 60 min at 200.deg. gave 276 g brittle hard resin softening point 62.deg., Mn 450, and .beta.-resin content 15 wt. %.				
ST	tar formaldehyde resin; <b>phenol tar</b> resin; maleic anhydride tar resin				
IT	Tar				
	RL: USES (Uses)				
	(polymer with formaldehyde and phenol)				
IT	2,5-Furandione, polymer with formaldehyde and tar				
	Paraformaldehyde, polymer with phenol and tar				
	Phenol, polymer with formaldehyde and tar				
	RL: PREP (Preparation)				
	(prepn. of)				

L1 ANSWER 68 OF 76 CA COPYRIGHT 2001 ACS

AN 80:33631 CA

TI Determination of the composition of phenols and products of their pyrolysis by infrared absorption spectroscopy

AU Gorska, Maria; Gluzinska, Maria

CS Inst. Chem. Przem., Warsaw, Pol.

SO Chem. Anal. (Warsaw) (1973), 18(5), 969-76

CODEN: CANWAJ

DT Journal

LA Polish

CC 80-6 (Organic Analytical Chemistry)

AB PhOH, p-cumylphenol, acetophenone .alpha.-methylstyrene and its dimers, cumene, and dimethylphenylcarbinol in **phenol tars** and their pyrolysis products were detd. by ir absorption; the anal. bands

were

510, 830, 595, 783, 1050, and 860 cm<sup>-1</sup>, resp. Liq. samples were analyzed without preliminary treatment, while solid samples were dissolved in cumene. The std. deviation was 0.2-4.1%; .ltoreq.4-5 components present in .gtoreq.2-5% levels can be detd. in 1 sample.

ST **phenol tar** analysis IR; cumylphenol detn tar; acetophenone detn tar; methylstyrene detn tar; cumene detn tar; methylphenylcarbinol detn tar

IT Tar

RL: ANST (Analytical study)

(anal. of phenol, ir photometric)

IT Phenols, analysis

RL: ANT (Analyte); ANST (Analytical study)

(detn. of, ir photometric)

IT Benzene, (1-methylethenyl)-, dimers

Benzene, (1-methylethenyl)-, dimers, pyrolysis products

Benzene, (1-methylethenyl)-, pyrolysis products

Benzene, (1-methylethyl)-, pyrolysis products

Benzenemethanol, .alpha.,.alpha.-dimethyl-, pyrolysis products

Ethanone, 1-phenyl-, pyrolysis products  
 Phenol, pyrolysis products  
 Phenol, 4-(1-methyl-1-phenylethyl -, pyrolysis products  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, ir photometric)  
 IT 98-82-8 98-83-9, analysis 98-86-2, analysis 108-95-2, analysis  
 599-64-4 617-94-7  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of, ir photometric)

L1 ANSWER 69 OF 76 CA COPYRIGHT 2001 ACS  
 AN 78:58042 CA  
 TI Removing sulfuric acid from mixtures arising from the acid fission of  
 cumene hydroperoxide  
 IN Boehme, Guenter; Kiessling, Wolfgang; Moll, Karl Klaus; Raue, Bernd  
 SO Ger. (East), 4 pp.  
 CODEN: GEXXA8  
 DT Patent  
 LA German  
 IC C07C  
 CC 25-10 (Noncondensed Aromatic Compounds)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 91643		19720805	DD 1971-153765	19710315

AB The title process involves extn. with a small amt. of water and  
 eliminates

the need for neutralization of the mixt. and subsequent deposition of  
 salts in distn. columns. Thus, a cumene hydroperoxide decompn. mixt.  
 contg. cumene 0.80, PhCOME 0.95, Me2PhCOH 0.05, H2O 0.60, Me2CO 34.90,  
 .alpha.-methylstyrene (I) 1.10, PhOH 57.45, higher phenols 2.10, I dimer  
 0.60, **phenol tar** 1.20, mesityl oxide 0.15, and H2SO4  
 0.10 wt. % was treated countercurrently at 4 l./hr in an extn. column  
 filled with Raschig rings with 1 l./hr H2O at 40.degree. (theor. step no.  
 0.24) to give a mixt. contg. <10 mg/l. H2SO4. Eight further examples  
 illustrated changes in extn. conditions.

ST sulfuric acid extn; cumene hydroperoxide acid fission; phenol mixt acid  
 removal

IT 7664-93-9, uses and miscellaneous  
 RL: REM (Removal or disposal); PROC (Process)  
 (removal of, from mixts. from fission of cumene hydroperoxide)

IT 80-15-9  
 RL: RCT (Reactant)  
 (sulfuric acid removal from mixts. from fission of)

IT 67-64-1P, preparation 108-95-2P preparation  
 RL: PREP (Preparation)  
 (sulfuric acid removal from mixts. from fission of cumene  
 hydroperoxide)

L1 ANSWER 70 OF 76 CA COPYRIGHT 2001 ACS  
 AN 77:127448 CA  
 TI Rigid foams from bituminous materials, phenols, and  
 hexamethylenetetramine.  
 PA Ruetgerswerke A.-G.  
 SO Fr., 12 pp.  
 CODEN: FRXXAK  
 DT Patent  
 LA French  
 IC C08H  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2082155		19720114	FR 1970-7857	19700305

AB A rigid bituminous foam with good mech. properties, compression strength,



dimensional stability, heat resistance, and low water absorption and permeability, was prep'd. by heating phenols with tar or asphalt in the presence of an alk. catalyst and a pore forming agent under pressure to give a foam. Thus, 120 parts asphalt was mixed with 80 parts phenol [108-95-2] at 100.deg. and 9.6 parts hexamethylenetetramine (I) [100-97-0] and 1.5 parts solid NaOH were added. The temp. was increased to 180.deg. by the exothermic reaction. At 170.deg., on cooling, 6% I was added and the mixt. expanded under pressure to give a fine, uniform celled foam of 1.0 kg/m3 sp. gr. and 10 kg/m2 compression strength. Similar foams were prep'd. using wood tar and mixts. contg. PhOH, cresols, and xylenols.

ST asphalt phenol foam; bitumen phenol foam; coal tar phenol foam; wood tar phenol foam; compression strength bitumen foam

IT Bituminous materials  
(cellular, from hexamethylenetetramine-contg. phenol-tar condensates)

IT Pitch  
Asphalt  
Tar  
RL: USES (Uses)  
(phenol condensates with, cellular)

IT Phenols, polymers  
RL: USES (Uses)  
(tar condensates with, cellular)

IT Phenol, polymers with tars  
Phenol, 2-methyl-, polymers with tars  
Phenol, 3-methyl-, polymers with tars  
Phenol, 4-methyl-, polymers with tars  
RL: USES (Uses)  
(cellular, hexamethylenetetramine-contg.)

IT 100-97-0, uses and miscellaneous  
RL: USES (Uses)  
(blowing agent, in cellular phenol-tar condensates)

L1 ANSWER 71 OF 76 CA COPYRIGHT 2001 ACS  
AN 75:131535 CA  
TI Composition of a xylenol fraction  
AU Thielemann, Horst  
CS Halberstadt, E. Ger.  
SO Mikrochim. Acta (1971), (5), 717-723  
CODEN: MIACAQ  
DT Journal  
LA German  
CC 52 (Coal and Coal Derivatives)  
AB The compns. of tech. xylenol fractions from coaltar distn., 1 of which was obtained from 2/3 brown coal tar phenols and 1/3 from bituminous coal tar phenols, were detd. An adhesive for hardboard made from fibrous materials is produced from a xylenol-base material (Amocol X). Fractionation produces .ltoreq.10% b. <205.degree. and .gtoreq.90% b. <225.degree.. The pyridine content is .ltoreq.1.5% and the xylenol fraction in 10% NaOH has no tendency toward sepn. of oily drops or flocculation. Ir spectrograms of the crude xylenol fraction prep'd. by sepn. of PhOH and cresols by fractional distn. show no essential differences. Mass spectrometry gives no useful results. The ir spectra show the presence of 9 components, of which up to 6 components are quan. detd. From bituminous and brown coal tar, the xylenol fractions contain 2,4-dimethylphenol 16.4 and 10.1, 2,5-dimethylphenol 9.3 and 6.8, 3-ethylphenol 13.0 and 18.6, 4-ethylphenol 4.2 and 1.0, 3,5-dimethylphenol 4.8 and 6.2, 3,4-dimethylphenol 4.0 and 4.8, and other polyalkyl phenols .3 and 1.4%, resp. The brown coal tar xylenols contain 11.4% phenol ethers as compared with none in the other tar xylenols. Thinlayer chromatog. was used for identification of the

portion of the crude xylene fraction nonvolatile in steam, for sepn. and identification of the tech. "pure" xylene fraction, and for sepn. of their coupling products with 4-benzoylamino-2,5-diethoxyaniline, anthraquinone-1-diazonium chloride, and condensation products with 1-phenyl-2,3-dimethyl-4-amino-5-pyrazolone.

ST xylene tar fractions compn; brown coal tar xylenols; bituminous coal tar xylenols; adhesive hardboard; IR tar xylene fractions; phenols sepn tar xylenols; ethers **phenol tar** xylenols

IT Tar  
RL: PROC (Process)  
(xylene fraction of)

IT Phenol  
RL: USES (Uses)  
(in xylene fraction of tar)

IT 1300-71-6  
RL: USES (Uses)  
(tar fraction contg.)

L1 ANSWER 72 OF 76 CA COPYRIGHT 2001 ACS  
AN 74:146954 CA  
TI Distribution of dihydric phenols between water and organic solvent phases  
AU Molder, L.; Tamvelius, H.  
CS USSR  
SO Tr. Tallin. Politekh. Inst., Ser. A (1969), No. 270, 143-50  
From: Ref. Zh., Khim. 1969, Abstr. No. 22P76  
CODEN: TTPIAZ

DT Journal  
LA Russian  
CC 68 (Phase Equilibria, Chemical Equilibria, and Solutions)  
AB Results from detn. of equil. distribution of dihydric phenol constituents of **phenol (tar)** water of shale conversion plants in water-BuOAc and iso-Pr2O mixt. at various temps. and compn. of the solvent  
are presented. Pure resorcinol and dihydric phenol mixt. of the following compn. was used (%): 5-methylresorcinol 38.1, 2,5-dimethylresorcinol 22.7, 5-ethylresorcinol 6.6, 4,5-dimethylresorcinol 9.1, 2,4,5-trimethylresorcinol 8.5, unidentified diphenols 15.0. Equil. phases were analyzed gas chromatog. Conc. dependence of interface distribution coeff. was insignificant. Dihydric phenol distribution coeff. at a given temp. depends linearly on the compn. of a solvent. Formulas for calcg. distribution coeffs. of 6 dihydric phenols in water-BuOAc and iso-Pr2O mixt. system are presented. Selectivity of a solvent (with respect to 5-methylresorcinol) in relation to any alkylresorcinol depends little on solvent compn.

ST phenols extn; resorcinols extn  
IT Partition  
(of resorcinol derivs., between aq. soln. and org. solvents)

IT Phenols, properties  
RL: PRP (Properties)  
(partition of, between aq. soln. and org. solvents)

IT 108-20-3 123-86-4  
RL: PRP (Properties)  
(partition of resorcinol derivs. between aq. soln. and)

IT 108-46-3, properties 488-87-9 504-15-4 527-55-9 4299-72-3  
20427-81-0  
RL: PRP (Properties)  
(partition of, between aq. soln. and org. solvents)

L1 ANSWER 73 OF 76 CA COPYRIGHT 2001 ACS  
AN 73:83664 CA  
TI Identification of higher-boiling by-products of the synthesis of phenol  
by the cumene process  
AU Fuellbier, H.; Kiessling, W.; Mol., K. K.

CS VEB Leuna-Werke "Walter Ubricht", Leuna, Ger.  
SO J. Prakt. Chem. (1970), 312(2), 377-400  
CODEN: JPCEAO  
DT Journal  
LA German  
CC 80 (Organic Analytical Chemistry)  
AB The compn. of the tar obtained during the manuf. of PhOH by the cumene  
20 process was analyzed by gas chromatog. by using column of 0.5% Carbowax  
M on glass beads, Ar as a carrier gas, and a flame-ionization detector.  
The column temp. was 80.degree.. The tar was rich in PhOH,  
2,4-diphenyl-4-methyl-2-pentene, and p-cumylphenol.  
ST phenol cumene process chromatog anal; cumene process phenol chromatog  
anal; gas chromatog **phenol tar**; chromatog gas  
**phenol tar**; tar phenol gas chromatog  
IT 599-64-4 6258-73-7  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, in phenol prepn. products)  
IT 108-95-2P, preparation  
RL: ANST (Analytical study); PREP (Preparation)  
(manuf. of, tar anal. from)

L1 ANSWER 74 OF 76 CA COPYRIGHT 2001 ACS  
AN 71:32059 CA  
TI Production of high grade diphenylpropane from phenol of the distillate  
from **phenol tar** coking in pilot plant apparatus  
AU Suchkov, V.; Nazarov, V.; Toloknov, R.; Ioonas, R. V.  
CS USSR  
SO Goryuch. Slantsy (1967), No. 6, 6-10  
From: Ref. Zh., Khim. 1968, Abstr No. 19P71  
CODEN: GOSLAH  
DT Journal  
LA Russian  
CC 51 (Petroleum, Petroleum Derivatives, and Related Products)  
AB Optimal conditions were detd. for diphenylpropane (I) synthesis in a  
pilot  
app. from a phenol fraction contg 90% phenol, produced by distn. of  
pyrolysis products from **phenol tar** obtained during  
phenol production by the cumene method. The phenol fraction was  
condensed  
with acetone in 74% H2SO4 in the presence of H2S at 30-40.degree. for 2  
hrs. The product, m. 147-50.degree., useful for producing polycondensed  
resins, was recrystd. from C2H4Cl2. The design parameters for synthesis  
and sepn. of I were detd. The app. is diagramed.  
ST phenyl propanes prodn; **phenol tars** use; acetone  
phenols condensation; phenols acetone condensation; condensation phenols  
acetone  
IT 108-95-2, uses and miscellaneous  
RL: USES (Uses)  
(diphenylpropane manuf. from distillate contg.)  
IT 5814-85-7P  
RL: PREP (Preparation)  
(manuf. of, from phenol-contg. distillate)

L1 ANSWER 75 OF 76 CA COPYRIGHT 2001 ACS  
AN 68:81220 CA  
TI Nature of wastes and effluents from the Sindri fertilizers factory  
AU Theyyanni, M.  
CS Fertilizer Corp. India Ltd., Sindri, India  
SO Technology (Sindri, India) (1966) 3(4), 86-90  
CODEN: TCNOAQ  
DT Journal  
LA English  
CC 60 (Sewage and Wastes)  
AB The major objectionable materials in the effluents (.apprx.3-4 million

gallon/day) from the fertilizer factory and its adjoining cement factory are described. **Phenol, tar, cyanide, thiocyanates,** and **NH<sub>3</sub>** are the potential hazardous elements present in the waste water.

ST PHENOL FERTILIZERS PLANTS WASTES; TARS FERTILIZERS PLANTS WASTES;  
 CYANIDES  
 FERTILIZERS PLANTS WASTES; FERTILIZERS PLANTS WASTES; EFFLUENTS  
 FERTILIZERS PLANTS; THIOCYANATES FERTILIZERS PLANTS; AMMONIA FERTILIZERS  
 PLANTS WASTES

IT Wastes  
 (of fertilizer factory at Sindri, India)

IT Fertilizers  
 RL: PROC (Process)  
 (waste water of plant for making, at Sindri, India)

L1 ANSWER 76 OF 76 CA COPYRIGHT 2001 ACS  
 AN 67:2823 CA  
 TI Hydrogenation of by-products of phenol production: acetophenone, dimers  
 of .alpha.-methylstyrene, and the neutral fraction of phenolic resins  
 AU Vol-Epshtein, A. B.; Zharova, M. M.  
 SO Neftekhimiya (1967), 7(1), 13-18  
 CODEN: NEFTAH  
 DT Journal  
 LA Russian  
 CC 25 (Noncondensed Aromatic Compounds)  
 GI For diagram(s), see printed CA Issue.

AB Acetophenone (I), 1,1,3-trimethyl-3-phenylindan (II), a neutral fraction  
 (III) of tar (obtained by treatment of **phenol tar**  
 soln. in C<sub>6</sub>H<sub>6</sub> with 2.5 and 10% NaOH and by its subsequent washing with  
 10% H<sub>2</sub>SO<sub>4</sub> and water until neutral), and .alpha.-methylstyrene dimer (IV)  
 mixt.  
 were hydrogenated on Al-Co-Mo catalyst at 200-350.degree./50 atm. and 1.2  
 hrs.-1 vol. rate. I was hydrogenated in cumene soln. I hydrogenation at  
 350.degree. gave 97% I conversion (conversion to PhEt 82.6% and to  
 condensation products 9.5%) and the hydrogenation-product mixt. contained  
 H<sub>2</sub>O, C<sub>6</sub>H<sub>6</sub>, PhEt, cumene, PhPr, styrene, .alpha.-methylstyrene, I, and  
 condensation products. The I redn. rate increased with temp. II, m.  
 51.6.degree. and b. 304-6.degree. was practically stable to  
 hydrogenation  
 at 350.degree., while liquid IV and III (n<sub>20</sub>D 1.5740, d<sub>20</sub> 1.0235, b<sub>10</sub>  
 105-270.degree., iodine no. 31.6, contg. 0.09 wt. % S) were reduced to  
 give cumene, .alpha.-methylstyrene, and compds. b. >200.degree.  
 (0.9-16.4%  
 yield) as the main products. Dealkylation and isomerization of cumene  
 occurred during hydrogenation of , II, III, or IV; but decreased when a  
 mixt. of I and IV was hydrogenated. At ltoreq.300.degree. and 50 atm.,  
 Al-Co-Mo was an inefficient hydrogenation catalyst and gave a low yield  
 of  
 polymn. products. A good yield of redn. products was obtained at  
 350.degree. (the recommended hydrogenation temp. for the compds.  
 studied).  
 A significant yield of PhEt in I hydrogenation indicates that the  
 reaction  
 proceeds with 1-hydroxyethylbenzene as a transition product.

ST ACETOPHENONE HYDROGENATION; METHYLSTYRENE DIMERS HYDROGENATION; PHENOLIC  
 RESINS HYDROGENATION; ISOMERIZATION CUMENE; HYDROGENATION METHYLSTYRENE  
 DIMERS; PHENYLINDANS HYDROGENATION; TAR FRACTIONS HYDROGENATION;  
 HYDROGENATION CATALYSIS; DEALKYLATION CUMENE; ETHYLBENZENE FROM  
 ACETOPHENONE; CATALYSIS HYDROGENATION

IT Dimers  
 RL: RCT (Reactant)  
 (of .alpha.-methylstyrene, hydrogenation of)

IT Hydrogenation  
 (of acetophenone and .alpha.-methylstyrene dimers)

IT 98-86-2, reactions 3910-35-8 6144-04-3

RL: RCT (Reactant)  
(hydrogenation of)

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
FULL ESTIMATED COST	ENTRY	SESSION
	182.26	182.47
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY	SESSION
	-42.56	-42.56

STN INTERNATIONAL LOGOFF AT 11:27:00 ON 22 FEB 2001

Connection closed by remote host